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Google Classroom is a blended learning platform that aims to simplify creating, distributing and grading assignments in a paperless way. It was introduced as a feature of Google Apps for Education following its public release on August 12, 2014. On June 29, 2015, Google announced a Classroom API and a share button for websites, allowing school administrators and developers to further harness Google Classroom.

Google Classroom ties Google's many services together to help educational institutions go to a paperless system. Assignment creation and distribution is accomplished through Google Drive while Gmail is used to provide classroom communication. Students can be invited to classrooms through the institution's database, through a private code that can then be added in the student interface or automatically imported from a School Information Management System. Google Classroom integrates with students' and teachers' Google Calendar. Each class created with Google Classroom creates a separate folder in the respective Google service where the student can submit work to be graded by a teacher. Communication through Gmail allows teachers to make announcements and ask questions to their students in each of their classes. Teachers can add students directly from the Google Apps directory or can provide a code that can be entered for access to the class by students.

8 popular gadgets killed by smartphones
Over the course of the past few years, smartphones have undergone quite an evolution. They are ultra-powerful gadgets that come with super-fast CPUs, as much RAM as mid-range PCs, and numerous communication radios. Not just this, the modern-day smartphones are truly convergent devices. They can do a lot more than just being a communication device from taking photos and wirelessly controlling home appliances to juggling between calls and serving app notifications. In fact, today's smartphones are so capable that they have rendered some really popular gadgets all but obsolete. So eight gadgets almost 'killed' by smartphones are pager, portable media player(PMP), personal digital assistant, FM Radio receivers, GPS Navigation System, point-and-shoot digital camera, remote controls, Portable gaming console.
BP Goals Revisited: How Do We Get There?
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Background: Clinical trials have shown that treatment of hypertension reduces the risk of cardiovascular disease outcomes, including incident stroke (by 35 to 40%), myocardial infarction (by 15 to 25%), and heart failure (up to 64%).

Method: 9361 persons were randomly assigned with a systolic blood pressure of 130 mm Hg or higher and an increased cardiovascular risk, but without diabetes, to a systolic blood-pressure target of less than 120 mm Hg (intensive treatment) or a target of less than 140 mm Hg (standard treatment). Participants were required to meet all the following criteria: an age of at least 50 years, a systolic blood pressure of 130 to 180 mm Hg and an increased risk of cardiovascular events. Increased cardiovascular risk was defined by one or more of the following: clinical or subclinical cardiovascular disease other than stroke; chronic kidney disease, excluding polycystic kidney disease, with an estimated glomerular filtration rate (eGFR) of 20 to less than 60 ml per minute per 1.73 m2 of body surface area, calculated with the use of the four-variable Modification of Diet in Renal Disease equation; a 10-year risk of cardiovascular disease of 15% or greater on the basis of the Framingham risk score; or an age of 75 years or older. The primary composite outcome was myocardial infarction, other acute coronary syndromes, stroke, heart failure, or death from cardiovascular causes.

Results: The intervention was stopped early after a median follow-up of 3.26 years owing to a significantly lower rate of the primary composite outcome in the intensive-treatment group than in the standard-treatment group (1.65% per year vs. 2.19% per year; hazard ratio with intensive treatment, 0.75; 95% confidence interval [CI], 0.64 to 0.89; P < 0.001). All-cause mortality was also significantly lower in the intensive treatment group (hazard ratio, 0.73; 95% CI, 0.60 to 0.90; P = 0.003). Rates of serious adverse events of hypotension, syncope, electrolyte abnormalities, and acute kidney injury or failure, but not of injurious falls, were higher in the intensive treatment group than in the standard-treatment group.

Conclusion: Among patients at high risk for cardiovascular events but without diabetes, targeting a systolic blood pressure of less than 120 mm Hg, as compared with less than 140 mm Hg, resulted in lower rates of fatal and nonfatal major cardiovascular events and death from any cause, although significantly higher rates of some adverse events were observed in the intensive-treatment group.
Use of Mobiles and E-Health Intervention on Physical Activity, Sitting, and Weight

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There has been an explosion in the use of personal activity trackers, and it has become a huge industry. People are using these devices to track number of steps walked, number of flights climbed, number of miles biked and hours slept. In the USA employers are asking employees to meet fitness goals by submitting such data to get discounts on the premiums of their employer funded health insurance. Do these devices actually improve health outcomes? Do they provide any lasting benefits? We will review evidence regarding the impact of these devices on health.
Trials of 2016: Which Changed My Clinical Practice: Part - I

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1. HOPE 3: Cholesterol Lowering in Intermediate-Risk Persons without Cardiovascular Disease

**CONCLUSIONS:** Treatment with rosuvastatin at a dose of 10 mg per day resulted in a significantly lower risk of cardiovascular events than placebo in an intermediate-risk, ethnically diverse population without cardiovascular disease.

2. LEADER: Liraglutide and Cardiovascular Outcomes in Type 2 Diabetes

**CONCLUSIONS:** In the time-to-event analysis, the rate of the first occurrence of death from cardiovascular causes, nonfatal myocardial infarction, or nonfatal stroke among patients with type 2 diabetes mellitus was lower with liraglutide than with placebo.

3. SPRINT: Intensive vs Standard Blood Pressure Control and Cardiovascular Disease Outcomes in Adults Aged ≥ 75 Years
Jeff D. Williamson et al. JAMA May 19, 2916

**CONCLUSIONS AND RELEVANCE:** Among ambulatory adults aged 75 years or older, treating to an SBP target of less than 120mmHg compared with an SBP target of less than 140mmHg resulted in significantly lower rates of fatal and nonfatal major cardiovascular events and death from any cause.
In individuals with clinically suspected IHD, possible strategies for initial diagnosis may range from no specific testing to non-invasive cardiac testing to direct referral for invasive coronary angiography. Non-invasive testing to establish diagnosis of IHD is appropriate for patient with an intermediate pre-test probability of disease. Appropriate selection of the exact non-invasive modality that is most suitable for a given patient is based on clinical presentation.

- Symptom-limited exercise is generally the preferred mode of stress in patients who can exercise to a satisfactory workload. Pharmacologic stress testing with imaging is typically performed in patients unable to exercise adequately.

- In patients with LBBB, ventricular pacing, or significant resting wall motion abnormalities, vasodilator SPECT should be preferred (even if the patient can exercise), unless vasodilators are contraindicated.

- In patients without significant resting wall motion abnormalities, either stress echocardiography or stress SPECT may be considered as the initial stress test, based primarily on local availability and expertise. It should be noted, however, that higher sensitivity may be more important that higher specificity, and stress SPECT may therefore be preferred, in patients with higher probability of IHD and stress echocardiography may be preferred in patients with low probability if IHD. Stress PET offers high sensitivity and specificity, but it is limited by reduced availability and high cost.

- Coronary CT Angiography (CTA) should be considered as an alternative to stress imaging to rule out IHD in patients with low intermediate probability provided that there is adequate technology, sufficient local expertise, and patients are considered suitable candidates, i.e., patient characteristics make a fully diagnostic CTA scan highly probable.

- Coronary CTA should also be considered in patients within the lower range of intermediate probability after an inconclusive exercise ECG test or stress imaging test, or in patients with contraindications to stress testing if conventional coronary angiography would otherwise be performed to rule out IHD. In patients with unclear results with any functional test or with coronary CTA, a second imaging test may be required to establish diagnosis according to patient characteristics and preference.

- Advantages of Cardiac MRI for perfusion imaging include lack of radiation, high spatial resolution, ability to perform absolute quantification of perfusion, limited operator dependence, signal characteristics that are largely independent of the patient’s body habitus, and additional information on cardiac structure and function provided in a comprehensive CMR study. Limitations pertain mainly to high cost, limited availability and expertise, and limited functional analysis in the presence of arrhythmias.
Both atrial and ventricular arrhythmias may occur in the setting of acute coronary syndrome (ACS) and sustained ventricular tachyarrhythmias (VAs) may be associated with circulatory collapse and require immediate treatment.

Arrhythmogenesis early in the course of an ACS, manifested as often polymorphic ventricular tachycardia (VT) or ventricular fibrillation (VF) is observed in a minority of patients with acute ischemia and is often associated with genetic predisposition. Incidence of in hospital mortality due to acute heart failure or VT/VF has declined markedly with the widespread use of reperfusion strategies. The electrical changes in acutely ischemic myocardium, and especially in the border zone of an evolving myocardial infarction (MI), initiate and maintain these arrhythmias. Prompt and adequate revascularization therapy, usually by interventional reopening of occluded vessels and stabilization of the culprit lesion with a stent, combined with initiation of adequate secondary prevention therapies (statin, dual antiplatelet therapy, beta-blockers, angiotensin-converting enzyme inhibitors, angiotensin receptor blockers) aimed at preventing subsequent acute coronary events, have markedly reduced these life-threatening events.
Cancer - Past, Present and Future for Thyroid Cancer

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In recent years, thyroid cancer has become an important topic of significant clinical interest due to its rapidly rising incidence. Majority of newly diagnosed thyroid cancers in the past twenty years are small intra-thyroidal, often asymptomatic and clinically occult low risk cancers. In spite of this steep rise in its incidence, the long term outcomes remain excellent. In view of the rising incidence of small favorable clinically occult cancers, the established treatment paradigms and philosophies need to be looked at carefully to deliver cost effective value based care to all patients. Improved understanding of the biology of progression of thyroid cancer from a very well differentiated tumor to anaplastic carcinoma has facilitated a selective management approach to these diverse groups of neoplasms, where prognosis ranges from nearly 100 % cure to uniform fatality. The importance of prognostic factors in developing risk group stratification is crucial in offering selective surgical treatment to low risk patients. The independent factors impacting on prognosis are patient’s age, gender, tumor histology, size, extra thyroid extension and distant metastases. Risk groups are defined based on these factors. Excessive surgery and adjuvant treatment has shown little benefit if any in low risk patients where appropriate surgery alone is curative. On the other hand, patients with advanced thyroid cancers and those with poorly differentiated cancers, require aggressive surgery for complete resection of the primary tumor and aggressive adjuvant treatment. Similarly, elective dissection of clinically occult regional lymph node metastases has no benefit to the patient. On the other hand, therapeutic comprehensive compartmental dissections of lymph nodes are recommended for clinically apparent gross metastases. Role of adjuvant radioactive iodine treatment is limited to patients with residual disease or in those with persistently elevated thyroglobulin following surgery. Availability of newer drugs such as Sorafenib, Lenvatinib, Cabozentinib etc., some of which are still in clinical trials, have a limited role in patients with symptomatic metastatic disease. Overall, the great majority of patients with differentiated carcinoma of the thyroid gland have an excellent prognosis and long term survivorship.
Impact of Recent Advances in Echocardiography on the Clinical Practice of Medicine

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Live/real time three-dimensional echocardiography represents a revolutionary advancement in cardiac ultrasound that is changing the practice of cardiology. It is superior to conventional two-dimensional echocardiography in the assessment of left ventricular function since it provides left ventricular volumes and ejection fractions without making an assumption regarding the geometric shape of the left ventricle. The technique also enables direct measurement and planimetry of stenotic valvular orifices as well as accurate assessment of the size and shape of vena contract in all types of valvular regurgitation. This has resulted in more reliable quantitative assessment of aortic valve stenosis, mitral stenosis, tricuspid stenosis as well as mitral, aortic, tricuspid and pulmonary valve regurgitation. Coronary arteries can also be visualized in three-dimensions and the severity and extent of stenotic lesions reliably assessed. All types of atrial and ventricular septal defects can be visualized en face allowing accurate assessment of their size, relationship to surrounding structures and size of rim tissue.

A recent innovation is the incorporation of speckle imaging in real time three-dimensional echocardiography. This facilitates three-dimensional measurement of left ventricular strain, twist and torsion. More recently, live/real time three-dimensional trans esophageal echocardiography has been developed which provides high quality three-dimensional images of cardiac valves especially the mitral valve. Another recent advance has been the development of hand-held or pocket echocardiographic instruments which have been found useful in screening patients for heart disease and can be carried in the lab coat pocket during ward rounds.
Pulmonary Embolism: How to Manage in 2017
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The incidence of Venous Thromboembolic Disease, including Pulmonary Embolism (PE) and Deep Vein Thrombosis is estimated at 108/100,000 of the population. Pulmonary embolisms have a range of clinical manifestations from those that are incidentally discovered to those that cause hemodynamic collapse. Thus, it is important to recognize the signs and symptoms of pulmonary embolism and be familiar with the diagnosis and treatment options. There are various ways to treat PE and newer methods include Novel Oral Anticoagulants (NOACs) and interventional therapies, for example catheter-directed thrombolysis. Finally, it is important to mention the multidisciplinary Pulmonary Embolism Response Team (PERT) and its usefulness in the treatment of PE in the inpatient setting.
Severe Hypertension during Pregnancy
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Hypertension is the most common medical problem encountered during pregnancy, complicating 2-3% of pregnancies. Hypertensive disorders during pregnancy are classified into 4 categories, as recommended by the National High Blood Pressure Education Program Working Group on High Blood Pressure in Pregnancy:

- Chronic hypertension
- Preeclampsia-eclampsia
- Preeclampsia superimposed on chronic hypertension
- Gestational hypertension (transient hypertension of pregnancy or chronic hypertension identified in the latter half of pregnancy). This terminology is preferred over the older but widely used term "pregnancy-induced hypertension" (PIH) because it is more precise.

In 2008, the Society of Obstetricians and Gynecologists of Canada (SOGC) released revised guidelines that simplified the classification of hypertension in pregnancy into 2 categories, preexisting or gestational, with the option to add "with preeclampsia" to either category if additional maternal or fetal symptoms, signs, or test results support this.

In 2015, the American College of Obstetricians and Gynecologists Committee on Obstetric Practice issued updated guidelines regarding the emergency treatment of acute onset severe hypertension during pregnancy, including the following:

- Acute-onset, severe hypertension that is accurately measured using standard techniques and is persistent for 15 minutes or longer is considered a hypertensive emergency.
- Intravenous (IV) labetalol and hydralazine have long been considered first-line medications for the management of acute-onset, severe hypertension in pregnant women and women in the postpartum period. Available evidence suggests that oral nifedipine also may be considered as a first-line therapy.
- Parenteral labetalol should be avoided in women with asthma, heart disease, or congestive heart failure.
- When urgent treatment is needed before the establishment of IV access, the oral nifedipine
algorithm can be initiated as IV access is being obtained, or a 200-mg dose of labetalol can be administered orally. The latter can be repeated in 30 minutes if appropriate improvement is not observed.

- Magnesium sulfate is not recommended as an antihypertensive agent, but magnesium sulfate remains the drug of choice for seizure prophylaxis in severe preeclampsia and for controlling seizures in eclampsia.
- Sodium nitroprusside should be reserved for extreme emergencies and used for the shortest amount of time possible because of concerns about cyanide and thiocyanate toxicity in the mother and fetus or newborn, and increased intracranial pressure with potential worsening of cerebral edema in the mother.

There is a need for adoption of standardized, evidence-based clinical guidelines for managing patients with preeclampsia. Individuals and institutions should have mechanisms in place to initiate the prompt administration of medication when a patient presents with a hypertensive emergency.

Massive DVT after TKR
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Deep vein thrombosis (DVT) causes significant morbidity and mortality in the general population. Oral anticoagulation therapy which is the gold standard mainstay therapy may reduce thrombus propagation but does not cause clot lysis and therefore does not prevent post thrombotic syndrome (PTS). Catheter-directed thrombolysis (CDT) can be used to treat DVTs as an adjunct to standard medical therapy with anticoagulation. At present consensus regarding its exact indications has not been generated. Current evidence suggests that CDT can reduce clot burden and DVT recurrence and consequently prevents the formation of PTS compared with systemic anticoagulation.

Most logical indications include acute proximal thrombosis in younger individuals with a long life expectancy and relatively little comorbidity. Limb-threatening thrombosis may also be treated with CDT, although the subsequent mortality remains high. A number of randomized controlled trials are currently under way comparing the longer-term outcomes of CDT compared with anticoagulation alone. Initial reports suggest that venous patency and valvular function are better maintained after CDT. The effectiveness of combined pharmacomechanical thrombectomy need to be investigated further before strong recommendations can be made. The reported short-term outcomes following catheter-based intervention for DVT are encouraging in selected patients. Further evidence is required to establish long-term benefits and cost-effectiveness. Need of vena cava filters have also been debated heavily and needs more clarity.
There is an advantage of blocking the sympathetic nervous system with beta blockers and the renin-angiotensin system (RAS) with angiotensin-converting enzyme (ACE) inhibitors, angiotensin receptor blockers (ARBs), and mineralocorticoid receptor antagonists (MRAs). This has formed the basis for pharmacologic treatment for heart failure (HF) for the past 25 years.

**Consensus** was a study of 252 patients with class IV HF treated with enalapril or placebo. Mortality was very high and significantly reduced with enalapril.

With patients on ACE inhibitors, there exists a chance about angiotensin escape, which occurs when angiotensin I is converted to angiotensin II by a different pathway. It was originally proposed that use of an ARB would block this pathway.

**ELITE II** was the first trial to test whether or not an ARB is better than an ACE inhibitor. It should be noted that losartan was not superior to captopril. Valiant was a trial in post-myocardial infarction population and demonstrated that valsartan was noninferior to captopril. Thus ARBs are no better than ACE Inhibitors but probably as good as ACE Inhibitors.

**ATMOSPHERE** used aliskiren, which is a direct renin inhibitor. Investigators reported higher rates of hypotension, renal impairment, and hyperkalemia when aliskiren and enalapril were given together compared with enalapril alone.

**Natriuretic peptides** are peptide hormones that are synthesized by the heart, brain and other organs. The release of these peptides by the heart is stimulated by atrial and ventricular distension, as well as by neurohumoral stimuli, usually in response to heart failure. The main physiological action of natriuretic peptides is to reduce arterial pressure by decreasing blood volume and systemic vascular resistance.

**PARADIGM-HF** trial was an active-controlled study that evaluated the superiority of Entresto vs. Enalapril on HF hospitalization and mortality reduction in patients with chronic HF with reduced ejection
fraction (HFrEF). The study provided evidence to support the replacement of ACE inhibitors or ARBs with Entresto in the management of chronic HFrEF. Data and safety monitoring board stopped the trial early for overwhelming benefit. For the primary endpoint of cardiovascular death or HF hospitalization, there was a 20% reduction. There was also a 20% reduction in cardiovascular death and HF hospitalization with a 16% reduction in all-cause mortality. Significant Reduction in Primary Endpoints, CV Death, and All-Cause Mortality were reported.

Sacubitril/valsartan inhibits the RAS and enhances endogenous compensatory vasodilators (including the biologically active NPs). In PARADIGM-HF, sacubitril/valsartan was shown to significantly reduce CV death, HF hospitalization, and all-cause mortality. Sacubitril/valsartan has received a class I indication for use in patients with HFrEF and NYHA II-III HF by both North American and European guideline committees. The role of this agent for other indication, such as HFrEF and post-MI, is being studied in ongoing trials.

**PARADIGM-HF: Comparison of Sacubitril/Valsartan vs Enalapril in Dose-Reduced Patients**

<table>
<thead>
<tr>
<th>Dose Level</th>
<th>Enalapril</th>
<th>LCZ696</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>&lt;100 mg</td>
<td>100-200 mg</td>
</tr>
<tr>
<td>2</td>
<td>&lt;5 mg</td>
<td>5-10 mg</td>
</tr>
<tr>
<td>Events (n)</td>
<td>225</td>
<td>541</td>
</tr>
<tr>
<td>HR (95% CI)</td>
<td>0.79 (0.71, 0.88)</td>
<td>0.80 (0.67, 0.94)</td>
</tr>
<tr>
<td>P Value</td>
<td>0.043</td>
<td>0.008</td>
</tr>
</tbody>
</table>

Heart disease during pregnancy encompasses a wide spectrum of disorders. Basic concepts to keep in mind include:

- Blood volume and cardiac output rise during normal pregnancy, reaching a peak during the late second trimester.
- Preexisting cardiac lesions should be evaluated for the degree of risk to both the mother and the fetus during pregnancy.
- Contraindications to pregnancy include severe pulmonary hypertension or Eisenmenger's syndrome, cardiomyopathy with NYHA class III or IV symptoms, history of peripartum cardiomyopathy, severe uncorrected valvular stenosis, unrepaired cyanotic congenital heart disease, and Marfan syndrome with an abnormal aorta.
- Awareness of major cardiac drug classes contraindicated in pregnancy is important for the treatment of cardiovascular conditions during pregnancy.
- Anticoagulation during pregnancy presents unique challenges stemming from maternal and fetal side effects of warfarin, unfractionated heparin, and LMWH.

### Cardiovascular Drugs Used During Pregnancy

<table>
<thead>
<tr>
<th>Drug</th>
<th>Use</th>
<th>Potential Side Effects</th>
<th>Safe During Pregnancy</th>
<th>Safe During Breast-Feeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adenosine</td>
<td>Arrhythmia</td>
<td>None reported</td>
<td>Yes</td>
<td>No data</td>
</tr>
<tr>
<td>Beta blockers</td>
<td>Hypertension arrhythmias, MI, ischemia, hyperthyroidism, mitral stenosis, Marfan syndrome, cardiomyopathy</td>
<td>Fetal bradycardia, low birth weight, hypoglycemia, respiratory depression, prolonged labor</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Digoxin</td>
<td>Arrhythmia, CHF</td>
<td>Low birth weight, prematurity</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Drug</td>
<td>Use</td>
<td>Potential Side Effects</td>
<td>Safe During Pregnancy</td>
<td>Safe During Breast-Feeding</td>
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<td>Diuretics</td>
<td>Hypertension, CHF</td>
<td>Reduced uteroplacental perfusion</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Lidocaine</td>
<td>Arrhythmia, anesthesia</td>
<td>Neonatal depression</td>
<td>CNS</td>
<td>Yes</td>
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<td>Low-molecular-weight heparin</td>
<td>Mechanical valve,</td>
<td>Hemorrhage, unclear effects on maternal bone</td>
<td>Limited data</td>
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<td>hypercoagulable state, DVT, AF, Eisenmenger syndrome</td>
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<td>Hypertension</td>
<td>Fetal distress with maternal hypotension</td>
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<td>Yes</td>
<td>Yes</td>
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<td>Unfractionated heparin</td>
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<td>Maternal osteoporosis, hemorrhage,</td>
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<td>Warfarin</td>
<td>Mechanical valve,</td>
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<td>Aspirin</td>
<td>MI, Angina</td>
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<td>Clopidogrel Statins</td>
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Precise Indications of Antiarrhythmic Drugs

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Antiarrhythmic agents are a group of drugs used in many arrhythmias including atrial fibrillation (AF). Supraventricular tachycardia, ventricular tachycardia, inappropriate sinus tachycardia, atrial flutter, Wolff Parkinson White syndrome, bradarrhythmia and torsade de pointes. AF is the most frequently encountered arrhythmia. Prevalence increases with advancing age and so as its associated comorbidities, like heart failure. Choice of pharmacologic therapy depends on whether the goal of treatment is maintaining sinus rhythm or tolerating AF with adequate control of ventricular rates, preventing or treating ventricular tachycardia. Antiarrhythmic therapy and conversion of AF into sinus rhythm comes with the side effect profile, and we should select best antiarrhythmic therapy, individualized to the patient. New antiarrhythmic drugs are being tested in clinical trials. Drugs that target remodeling and inflammation are being tested for their use as prevention of arrhythmias or as upstream therapy.
Pharmacology in Stroke Patient: Acute and Secondary Prevention
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Stroke is a life-changing event that affects not only the person who may be disabled, but their family and caregivers. Worldwide, stroke is the commonest cause of mortality after coronary artery disease. Also, it is the commonest cause of chronic adult disability. India like other developing countries is in the midst of a stroke epidemic. WHO estimates suggest that by 2050, 80% stroke cases in the world would occur in low and middle income countries mainly India and China. In India, nearly one-fifth of the patients with first-ever stroke admitted to hospitals is estimated at 40 years or less. Changing habits and sedentary lifestyles have made the incidence of strokes more prevalent among South Asians, notably Indians, and can induce permanent disability or prove fatal, even as preventive measures are at hand, doctors maintain. Public awareness in this regard is still quite poor in our society.

Early recognition and diagnosis of stroke using validated tools outside hospital environment can help save life and limit disability. Specifically the Face Arm Speech and Time (FAST) test is a lay approach to diagnose stroke and is widely used to raise awareness about early recognition of stroke among the public in developed countries. Modern multimodal neuroimaging permits confirmation of infarction and/or hemorrhage in the central nervous system, reveals the location and size of the vascular lesion, excludes the stroke mimics and evaluates the relevant cerebrovascular anatomy. Lack of knowledge about stroke among the general public delays the initiation of acute management of stroke with delayed arrival of the patient with stroke to the hospital.

Because of cost of therapy and delayed hospital admission, thrombolytic therapy has been possible in only a very small number of acute ischemic stroke cases in India. Patients with severe stroke due to acute large cerebral artery occlusion are likely to be severely disabled or dead without timely reperfusion. Previously, intravenous tissue plasminogen activator (IV-TPA) within 4.5 hours after stroke onset was the only proven therapy, but IV-TPA alone does not sufficiently improve the outcome of patients with acute large artery occlusion. With the introduction of the advanced endovascular therapy, which enables more fast and more successful recanalization. Endovascular treatment for acute ischemic stroke has changed remarkably over the past decade.

Since the available US Food and Drug Administration-approved treatment options are time dependent, improving early stroke care may have more of a public health impact than any other phase of care. Timely and efficient stroke treatment should be a priority for emergency department and pre hospital providers. Presently, prevention of stroke is the best option considering the Indian scenario through control and/or avoiding risk factors of stroke. Early initiation of treatments for secondary stroke prevention is associated with an 80% reduction in risk of early recurrent stroke. Organized provision of care in a stroke unit have been found to increase the number of patients who survive, return home, and regain functional independence in their everyday.
Statins: To follow "Dosage" or to follow "LDL Levels" in CAD?

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The 2013 ACC/AHA guidelines suggest treatment with statin therapy in patients who have an estimated 10-year risk of atherosclerotic vascular disease of ≥ 7.5%. These guidelines do not recommend a treat-to-target approach, but instead recommend a specific intensity of statin for each risk category, and have been laden with controversy. The update to these guidelines in 2016 compared the different international guidelines and stressed that the key to treatment of cholesterol should be individualized per patient in order to reduce cardiovascular.

Guidelines for Use of Aspirin: Do We Have the Final Answer?

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Based on the results of studies like the Physicians’ Health Study conducted before the age of the statins, aspirin has often been recommended for primary prevention of coronary artery disease and strokes. This is particularly true of patients at higher risk of cardiovascular events like those with diabetes. But aspirin can increase the risk of GI ulcers and bleeding both GI and elsewhere. In addition, since the widespread use of statins, there has been significant decrease in risk of cardiovascular events. Does it still make sense to use aspirin for primary prevention? How do you balance the risk and benefit of aspirin and how do you identify the patients who are candidates for aspirin? We will look at the evidence and simple app that helps in decision-making by helping to answer these questions.
Guidelines for Management of Supraventricular Tachycardia

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1. The term “supraventricular tachycardia” (SVT) includes any arrhythmia originating above and including the bundle of His, and specifically excludes atrial fibrillation (AF).

2. Paroxysmal SVT is a regular, and typically narrow complex tachycardia that is characterized by sudden onset and termination. Its causes include atrioventricular nodal reentrant tachycardia (AVNRT), orthodromic atrioventricular reentrant tachycardia (AVRT) utilizing an accessory pathway, and atrial tachycardia (AT). Patients with recurrent bouts of symptomatic paroxysmal SVT should be considered for electrophysiologic study and catheter ablation.

3. The most common tachycardia in patients with the Wolff-Parkinson-White (WPW) syndrome is orthodromic AVRT. AVRT can occur in patients without pre-excitation on the resting electrocardiogram (ECG). In these cases, anterograde conduction over the pathway is not possible or very slow, and the pathway is referred to as “concealed” (as opposed to “manifest”).

4. AF with extremely rapid conduction over the accessory pathway (“pre-excited AF”) can lead to syncope and sudden death. Sudden death is more likely to occur in patients with a history of tachycardia (i.e., with prior symptoms), but may be the first manifestation of the accessory pathway. Patients with pre-excited AF and who are otherwise hemodynamically stable should be treated with intravenous ibutilide or procainamide. Intravenous digoxin, intravenous amiodarone, intravenous or oral beta- and calcium-channel blockers may lead to extremely rapid conduction over the accessory pathway and hemodynamic compromise in patients with pre-excited AF, and thus, should be avoided. Oral beta- or calcium-blocker therapy is reasonable for ongoing treatment of AVRT in patients without pre-excitation on the resting ECG.

5. Patients with asymptomatic pre-excitation on a 12-lead ECG are said to have a “WPW pattern.” Patients with intermittent pre-excitation on the resting ECG or abrupt loss of pre-excitation during exercise testing are considered to be at low risk for life-threatening arrhythmias. Other patients may be considered for electrophysiologic (EP) study for risk stratification. Catheter ablation of the accessory pathway should be performed if high-risk features are found on EP.
testing. It is also reasonable to observe patients with a WPW pattern without further evaluation. It is reasonable to consider catheter ablation in individuals who are unable to secure employment (e.g., pilots) because of a WPW pattern.

6. Catheter ablation of the cavo-tricuspid isthmus (CTI) should be considered in patients with symptomatic atrial flutter or those in whom the rate cannot be controlled with medical therapy. Patients undergoing catheter ablation of the CTI should be counseled that there is a reasonable chance that they may develop AF during follow-up. Oral anticoagulation for stroke prevention in patients with atrial flutter should be prescribed according to the patient’s risk factors using the common risk stratification schemes for patients with AF.

7. The resting heart rate in patients with inappropriate sinus tachycardia (IST) is typically >100 bpm. A diagnosis of IST is made after excluding conditions associated with a heightened sympathetic tone. It is also important to evaluate the possibility of postural orthostatic tachycardia syndrome (POTS) in patients with IST, as the use of beta-blockers may exacerbate the symptoms in the former and may be helpful in the latter. Ivabradine, an inhibitor of the If channel, reduces sinus node automaticity and is useful in patients with IST.

8. Patients with adult congenital heart disease and atrial tachycardia/flutter should be treated with oral anticoagulation using the same risk stratification schemes as for AF.

Guidelines for Management of Supraventricular Tachycardia
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Guidelines for Heart Failure

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1. Apply a novel algorithm for the diagnosis of heart failure in the non-acute setting based on clinical probability of the disease (derived from medical history, physical examination and resting ECG), the assessment of circulating natriuretic peptides and transthoracic echocardiography.

2. Use transthoracic echocardiography in patients with suspected or established HF for the assessment of myocardial structure and function along with the measurement of LVEF to establish the diagnosis of HF with reduced (HFrEF, LVEF ≥ 50%).

3. To prevent or delay onset of HF and prolong life, treatment of arterial hypertension, use of statins in patients with or at high risk of coronary artery disease, use of ACE-I in patients with asymptomatic left ventricular dysfunction and beta-blockers in those with asymptomatic left ventricular dysfunction and a history of myocardial infarction are recommended.

4. Implement life-saving pharmacotherapy in patients with symptomatic HFrEF, containing a combination of an ACE-I (or ARB if ACE-I not tolerated), a β-blocker and a MRA. If a patient still remains symptomatic sacubitril/valsartan is recommended to replace ACE-I. Use diuretics in order to improve symptoms and exercise capacity in patients with signs and/or symptoms of congestion.

5. Ensure an ICD implantation in HF patients who either have recovered from a ventricular arrhythmia causing haemodynamic instability or in those with symptomatic HF, LVEF ≤ 35% (despite at least 3 months of OMT), in order to reduce the risk of sudden death and all-cause mortality. ICD implantation is not recommended within 40 days of an MI as implantation at this time does not improve prognosis.

6. Implant a cardiac resynchronization therapy in symptomatic patients with HF, LVEF ≤ 35% (despite at least 3 months of OMT), in sinus rhythm with a QRS duration ≥ 130 msec and LBBB QRS morphology, in order to improve symptoms and reduce morbidity and mortality. CRT is contra-indicated in patients with a QRS duration < 130 msec.

7. In the management of a patient with suspected acute HF, try to shorten all diagnostic and therapeutic decisions. During an initial phase, reassure that circulatory or/and ventilatory support is provided in case of either cardiogenic shock or/and ventilatory failure, respectively.

8. In parallel, identify immediately coexisting life threatening clinical conditions and/or precipitants
(according to the CHAMP acronym - acute Coronary syndrome, Hypertension emergency, Arrhythmia, acute mechanical cause, pulmonary embolism) and introduce a guideline-recommended specific management.

9. During an early phase of AHF for an optimal management apply the algorithm based on clinical profiles evaluating the presence of congestion and peripheral hypoperfusion. Remember that hypoperfusion is not synonymous with hypotension, but often hypoperfusion is accompanied by hypotension.

10. Enroll HF patients in a multidisciplinary care management program in order to reduce the risk of HF hospitalization and mortality.
Leadless Pacemaker and Subcutaneous ICD: The Future is Here

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Traditional cardiac pacemaker systems generally include a subcutaneous pulse generator placed in the chest wall and trans venous pacing leads affixed to myocardial tissue. The leads are considered the weakest link of pacing systems. The majority of early complications are related to lead placement and include pneumothorax, difficulty obtaining upper extremity venous access, hematoma formation, cardiac perforation, and lead dislodgement. Long-term complications that also contribute significantly to patient morbidity include fracture due to mechanical lead stress, venous thrombosis, and infection of the pocket and bloodstream. Miniature leadless pacemakers have the potential to minimize many of the complications associated with trans venous pacing systems.

Future avenues of development include management at the time of battery depletion as well as communication with other CIEDs. Another exciting area involves transforming kinetic energy from cardiac motion to fuel pacemaker function to obviate the issue of battery depletion and device replacement.
For nearly 3 decades, the implantable cardioverter-defibrillator (ICD) has been available to patients who survived life-threatening rapid heart rhythms or are at risk of experiencing them. The ICD comprises a device generator coupled with a defibrillation lead. Traditional ICDs are implanted under the skin with the generator positioned beneath the collar bone. The defibrillation lead is inserted through the veins in the chest that course to the heart, permitting direct attachment to the inside of the heart, specifically the right ventricle.

The subcutaneous ICD (SICD) is a novel defibrillator developed over the past decade. The SICD provides an alternative option for patients whose physicians are recommending an ICD. The SICD consists of an ICD generator and a defibrillation lead, similar to a traditional ICD. However, the defibrillation lead remains completely outside the chest cavity.

The greatest advantage of the SICD is that the lead does not course through the central veins in the chest, nor is it attached to the tissue within the heart chambers. Patients who opt for an SICD avoid the need for possible lead removal, or extraction, from the central veins and heart cavity.

Patients in whom an SICD may be considered include those who have developed blockages of the veins as a result of prior procedures or whose veins already have leads used for pacemakers or ICDs. Some individuals require their central veins for hemodialysis, and others require long-term intravenous drug therapy for cancer or other conditions. Individuals with metal heart valves in the chambers where ICD leads would typically course also cannot receive a traditional ICD. Adult patients born with heart abnormalities (congenital heart disease) may require ICDs but have had prior heart operations that render them without the venous connections to place leads within the heart chambers. In these patients, the SICD is a very promising alternative.

Finally, for individuals who have experienced complications from serious lead, device, or heart valve infections and remain at high risk of recurrent infection, the SICD is the device of first choice.
Cats and Humans with 9 lives
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Ancient Proverb: A cat has nine lives. For three he plays, for three he strays and for the last three he stays the nine lives myth is related to cats' ability to always land on their feet. Over time, people witnessed cats survive in situations that surely would have severely injured other animals. Some people likely began to believe that cats must have multiple lives.

Do Humans survive after death? Sudden Cardiac Death survivors and patients with Aborted Sudden Cardiac death have technically survived death and are living the cat’s charmed 9 lives. A patient who has had a SCA due to Ventricular Fibrillation and then appropriately shocked and defibrillated by the ICD has survived death and is living a new life. Patients who have undergone a heart transplant have technically survived death are living a new life (of a different heart / individual / donor).

Newer Biomarkers in Cardio Renal Intersection
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The term cardio renal syndrome (CRS) implies acute or chronic injury to the heart and kidneys that often involves a temporal sequence of disease initiation and progression. The classification of CRS is divided into five subtypes. Types 1 and 2 involve acute and chronic cardiovascular disease (CVD) scenarios leading to acute kidney injury (AKI) or accelerated chronic kidney disease (CKD). Types 3 and 4, describe AKI and CKD, respectively, leading primarily to heart failure, although, it is possible that acute coronary syndromes, stroke, and arrhythmias could be CVD outcomes in these forms of CRS. Finally, CRS type 5 describes a systemic insult to both heart and the kidneys, such as sepsis, where both organs are injured simultaneously in persons with previously normal heart and kidney function at baseline. The clinical management of patients with a cardio renal syndrome aims at reducing fluid overload and congestion, while improving kidney function. Early diagnosis and prompt therapies are key to better outcome. Biomarkers may help to gain insight on the ongoing pathological processes. An accurate and early diagnosis of the cardio renal syndrome based on clinical findings is not always possible. Serum creatinine, the derived eGFR and blood urea nitrogen are the standard tools for recognizing changes in renal function but suffer some limitations. In this deliberation, we will discuss the role of emerging biomarkers of renal tubular and glomerular injury, bone-mineral axis, or tubular cell-cycle arrest.
Trials of 2016: Which Changed My Clinical Practice: Part - II

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1. NIH Study: Genetic Risk, Adherence to a Healthy Lifestyle, and Coronary Disease
Amit V. Khera et al. NEJM Nov 13, 2016

CONCLUSIONS:
Across four studies involving 55,685 participants, genetic and lifestyle factors were independently associated with susceptibility to coronary artery disease. Among participants at high genetic risk, a favorable lifestyle was associated with a nearly 50% lower relative risk of coronary artery disease than was an unfavorable lifestyle.

2. GLAGOV Study: Effect of Evolocumab on Progression of Coronary Disease in Statin-Treated Patients.

CONCLUSIONS AND RELEVANCE:
Among patients with angiographic coronary disease treated with statins, addition of evolocumab, compared with placebo, resulted in a greater decrease in PAV after 76 weeks of treatment. Further studies are needed to assess the effects of PCSK9 inhibition on clinical outcomes.
Background: Stages in the natural history of heart failure (HF) clarify the relationship between cardiovascular disease (stage A), asymptomatic abnormalities in cardiac structure and function (stage B), overt symptomatic HF (stage C), and advanced HF (stage D).

Case presentation: Here is the case of 71 years old male with a history of ischemic cardiomyopathy (CM), ejection fraction (EF) 10%, admitted for the 3rd time in the past 4 months with HF. Past medical history notable for type II diabetes mellitus (DM), chronic renal insufficiency (Cr1.7), CABG was done 3 years ago. He had an implantable cardioverter defibrillator (ICD). Treatment included carvedilol 3.125 mg bid, Ramipril 2.5 mg qid, Furosemide 80 mg bid, Digoxin 0.125 mg OD. Examination on day 5 showed a BP of 96/68 mm Hg, HR 84 b/min, Lungs clear, Cor L shifted PMI, ∑P2, S3, JVP 8, RV heave, Abdomen liver 2 cm below CM, Na 131, K 4.2, Urea 60, Creat 2.1.

Inotropic Support: Cardiac shock pending definitive therapy or resolution BTT or Mechanical circulatory support (MCS) in stage D refractory to guideline-directed medical therapy (GDMT). Short term support for end-organ dysfunction in hospitalized patient with stage D and severe HF/EF. Mechanical circulatory support: MCS is beneficial in carefully selected patients with stage D HF in whom definitive management (e.g. Cardiac transplantation) is anticipated or planned. Non durable MCS is reasonable as a “bridge to recovery” or “bridge to decision for carefully selected patients with HF and acute profound disease. Durable MCS is reasonable to prolong survival for carefully selected patients with stage DHF/EF.

Cardiac Transplantation: Evaluation for cardiac transplantation is indicated for carefully selected patients with stage D HF despite GDMT, device, and surgical management.
Newer Frontiers in Management of Lipids
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Statins have been shown to be very effective and safe in multiple randomized clinical trials. They are the backbone of therapy to impact atherogenic dyslipidemia. However, even with optimal statin treatment, 60% to 80% of residual cardiovascular risk still exists. The patients with familial hypercholesterolemia which results in extremely high level of low density lipoprotein cholesterol (LDL-C) level and the patients who are intolerant or unresponsive to statins are the other hurdles of statin treatment. Recently, new classes of lipid-lowering drugs have been developed and some of them are available for the clinical practice. The pro-protein convertase subtilisin/kexin type 9 (PCSK9) inhibitor increases the expression of low density lipoprotein (LDL) receptor in hepatocytes by enhancing LDL receptor recycling. Outcome trials to reduce CV events will be available in 2017. The microsomal triglyceride transport protein (MTP) inhibitor and antisense oligonucleotide (AON) against Apo lipoprotein B (Apo B) reduce the Apo B containing lipoprotein by blocking the hepatic very low density lipoprotein synthesis pathway. EPA only agents seem to have efficacy against hypertriglyceridemia and CV outcome trials on their way. AON against Lp(a) and Apo CIII are in investigation. Apo A1 mimetics and agent to improve HDL functionality are being studied in research. This discussion will span therapies beyond statins to impact residual risk.
Contemporary guidelines for management of hypertension have a very strong focus on “evidences”. Most of the authorities believe that only prospectively defined primary endpoints from randomized, controlled, blinded clinical trials should be considered in decision-making. As a result, only a very small fraction of available information can be used in making the guidelines. This inevitably means many important issues that depend on other types of evidence, or the experience and judgment of experts, are now increasingly omitted.

Keeping this in mind, few messages can be drawn for 2017. For most individuals with hypertension, threshold to start treatment and goal to be targeted is the blood pressure value of 140/90 mm of Hg. Targeting systolic blood pressure goal of < 120-125 mm of Hg can be of significant help for reducing all-cause mortality and cardiovascular morbidity in certain high risk non-diabetic patients with age >75 years or those aging >50 years and having chronic kidney disease (except polycystic kidney disease) with eGFR from 20 to 60 ml/min/ 1.73 m2 BSA, or those ageing >50 years with subclinical or clinical cardiovascular disease except stroke or those aging >50 years with a 10-year risk of cardiovascular disease of 15% or greater on the basis of the Framingham risk score. Obviously, this benefit is achieved with a small cost in terms of increased rates of serious adverse events of hypotension, syncope, electrolyte abnormalities, and acute kidney injury or failure, but not of injurious falls. This clearly suggests the individualizing the decision through patients' participation. There remains a very interesting question, why diabetic patients with hypertension and similar high risk features should not be chased to a systolic blood pressure of 120 mm of Hg. Beta blockers will remain out of favor as the first line antihypertensive agent for uncomplicated hypertension due to their poor ability to offer protection against stroke and other potential adverse effects. Though newer beta blockers like bisoprolol, carvedilol and nebivilol do possess different and better pharmacokinetic and pharmacodynamics properties, they do inherit the “bads” of their class. Renin-angiotensin-aldosterone system (RAAS) blockers are the most preferred agents for younger patients with uncomplicated hypertension while calcium channel blocker (CCB)s or thiazide-type diuretic (THZ-D)s are the most preferred agents for patients ageing 60 years or more. Very important fact is majority of the patients of hypertension would need combination of medicines, if not earlier, later. RAAS blocker with CCB is a much preferred combination than either BB with THZ-D or RAAS blocker with THZ-D. It’s a very well proven fact that prefixed combination of antihypertensive medicines improves efficacy, compliance and cost-effectiveness. And for treating a chronic high risk illness which is largely asymptomatic, long term compliance with lifestyle modification and medicines is a must.
Bariatric Surgery: Does It Change the Outcomes?

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We are living in an obesity epidemic with an increase in prevalence of associated conditions like diabetes, obstructive sleep apnea, cardiovascular disease and osteoarthritis. We tell our patients that losing weight is a matter of taking in less calories and using up more energy. But are there any other factors? Why do people who lose weight with lifestyle changes almost invariably gain it back? What is the role of bariatric surgery in treating obesity and diabetes? We will review some of the hormonal relationships of adipose tissue with the brain and the gut and summarize evidence on the role of bariatric surgery.

Echo Assessment of Hypertrophic Cardiomyopathy and its Variants. Which can Cause Sudden Death?

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There are many variants of the classical hypertrophic cardiomyopathy which consists of asymmetric or symmetric ventricular septal hypertrophy, narrow left ventricular (LV) outflow tract, systolic anterior movements of the mitral valve and variable degree of LV outflow tract obstruction which often gets accentuated with the Valsalva maneuver. This type of cardiomyopathy is associated with sudden death. Obstruction in some cases may be localized to the apex which is hypertrophied with a narrow LV channel. It is often missed on the standard echocardiogram because the hypertrophied apical muscle masks the narrow apical channel and the homogenous nature of hypertrophy in this region mimics LV apical hypokinesis which may lead to the false diagnosis of ischemic heart disease. Administration of an echo contrast agent helps clarify the diagnosis by delineating the narrow channel produced by LV apical hypertrophy. Mid LV cavity obliteration and obstruction represents another variant of hypertrophic cardiomyopathy. This may be associated with LV apical aneurysm formation. Most of the time it is not a true aneurysm as the apex retains considerable contractile power. Mid LV cavity obstruction may also be produced by disproportionate hypertrophy of the LV papillary muscles. Most of these variants have a relatively benign prognosis in terms of sudden death as compared to the classical hypertrophic cardiomyopathy. One or more variants may co-exist with the classical variety.
How, When, Where, What to Order in Genetic Tests in Cardiac Patients

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The scientific and the technological discoveries in the field of genetics have helped us to move from experimental laboratory techniques to bedside making a difference in health care. Clinical Genetics is the medical specialty which provides a diagnostic service and genetic counseling for individuals or families with, or at risk of, conditions which may have a genetic basis. A genetic disorder which affects cardiovascular system is covered under the umbrella of Cardiovascular Genetics and is still at an infancy in Indian population.

Genetic tests are used as a health care tool in cardiology to detect gene variants associated with a specific disease or condition, such as hypertrophic & dilated cardiomyopathy, thoracic aortic aneurysm, Brugada syndrome, Long QT syndrome, Catecholaminergic polymorphic VT, Marfan syndrome/Loeys-Dietz syndrome, thoracic aortic aneurysms, sudden death syndrome and early cardiovascular atherosclerotic disease. The term "genetic testing" covers an array of techniques including analysis of human DNA which aids in confirming the diagnosis and identification of family members at risk for the condition.

Two or more family members with the same type of cardiovascular condition, arrhythmias, cardiomyopathy, enlarged aorta or aortic aneurysm in the chest at a young age (<60), family member who died from a sudden cardiac death and family member with a gene mutation related to a cardiovascular condition are some of the cardiac conditions enumerated where a clinical geneticist consultation is requisite.

Cardio-Pharmacogenomics identifies genetic contributions to drug response, creating genome-based approaches to predict drug response, and applies discoveries to promote the use of genomic information into clinical practice. The cardiovascular drug–gene pairs with the most evidence supporting implementation in clinical practice are clopidogrel and CYP2C19 genotype; warfarin and both CYP2C9 and VKORC1 genotypes; and simvastatin and SLCO1B1 genotype.

We hope that in near future Clinical Genetics specialty gain its importance in cardiovascular diseases and facilitate the healthcare for better treatment decisions.
**Elderly Old Lady with Severe Unstable Angina**

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**Background:** Left Main Coronary Artery stenosis (LMCA) is usually associated with disease in downstream epicardial vessels. LMCA stenosis is relatively infrequent but a contributing cause of symptomatic coronary artery disease (CAD). Multiple studies have found LMCA stenosis to be an independent indicator of increased morbidity and mortality rates among patients with CAD.

**Case presentation:** Here is the case of 85 years old, hypertensive female who had presented with chest pain, perspiration, severe angina requiring 2-3 tablets of sublingual sorbitrate daily at night with history of stage-I diastolic dysfunction, MV – mitral annulus, trivial TR. Coronary angiography revealed 90% severe calcific lesion in LMCA; origin 95%, mid 70% lesion followed by 80% lesion in LAD; Origin 95% lesion in LCX; proximal 90% lesion in early OM1; proximal RCA with 50-60% lesion followed by 90% lesion.

*Rotational atherectomy* has shown its usefulness in the successful preparation of lesions for the effective delivery of stents, especially those that are heavily calcific in nature and usually not amenable to traditional high pressure or cutting balloon techniques.

*Fractional flow reserve* is defined as the pressure after (distal to) stenosis relative to the pressure before the stenosis. The result is an absolute number; an FFR of 0.83 means that a given stenosis causes a 20% drop in blood pressure.

*In Intravascular Ultrasound*, the transducers have been miniaturized to less than four hundredths of an inch and placed on the tip of a catheter. This catheter can be slipped into the coronary arteries over the same guide wire that is used to position angioplasty balloons or stents.

**Result:** Percutaneous Coronary Intervention (PCI) warrants rapid reperfusion of the LMCA, saving life of the patients in most cases by allowing quick restoration of flow and preserving myocardial viability avoiding the delays of a major surgical intervention. PCI improves survival in selected stable patients with LMCA disease with anatomy associated with low-intermediate risk of PCI and increased risk of CABG.

**Conclusion:** PCI to improve survival is reasonable in patients with UA/NSTEMI when LM is the culprit lesion and patient is not eligible for CABG.
STEMI: Initial Assessment and Risk Stratification

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Introduction

Patients suffering from ST-elevation myocardial infarction (STEMI) have preexisting characteristics that vary across a range of severity. On arrival at hospital, patients with STEMI should undergo a focused clinical history and physical examination. Although most patients with STEMI complain of chest pain, pressure, or tightness, other less typical symptoms, such as nausea, emesis, neck/arm/jaw pain, dyspnea, presyncope/syncope, or severe fatigue, may predominate, especially among women, patients with diabetes, and the elderly.

Heart failure, older age and diabetes mellitus are the strongest predictors of mortality in patients presenting with STEMI.

ECG criteria for diagnosis of STEMI in left bundle branch block (LBBB) include ST elevation in at least one lead of >1 mm concordant to the positive QRS complex (5 points); ST depression of ≥ 1 mm in v1-v3 (3 points); Discordant ST elevation >5 mm in at least one leads with a predominant negative QRS (2 points).

An ECG with right precordial leads should generally be performed in patients with inferior STEMI, and posterior leads (V7-V9) may be helpful to detect STEMI due to left circumflex artery occlusion that may be silent on a standard 12-lead ECG.

Concurrent ST-segment depression in multiple leads along with ST-segment elevation in lead aVR, which may be seen in patients with occlusion of the left main or proximal left anterior descending (LAD) coronary artery. ST-segment elevation in V4R, suggests RV MI in association with IMI, which is associated with a higher mortality rate than in those without RV involvement. Early ECG indicators of high risk are those that reflect particularly large territory at risk (e.g., extreme magnitude of ST elevation, posterior extension, involvement of the conduction system).

Thrombolysis risk index (TRI) for STEMI is a simple risk score designed to be used at initial presentation to predict 30-day mortality in STEMI patients treated with fibrinolytics. TRI is a continuous index derived from three readily available clinical variables and is calculated using the equation: (heart rate × [age/10]2/systolic blood pressure). TRI is predictive of not just in-hospital mortality, but also of long-term mortality post STEMI.
The importance of secondary prevention after ST-elevation myocardial infarction (STEMI) is becoming of paramount importance with the advent and success of percutaneous coronary intervention. More patients are surviving and leaving the hospital. It is important, not only for cardiologists, but for general practitioners to be well-versed in these strategies. Cardiac rehabilitation is one of the most efficacious tools that we have for secondary prevention. Others include lifestyle modifications, for example quitting smoking, and drugs, for example, dual antiplatelet therapy, statins, beta blockers and ACE-inhibitors. The most vital role of the practitioner is to communicate the seriousness of the diagnosis to the patient and overcome barriers to compliance and follow up.
Echo Cardiography in Hypertension: What Physicians Should Know?

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Hypertension is a significant health problem that is associated with a considerable morbidity and mortality. The hallmark of hypertensive disease is a gradual increase in left ventricular (LV) mass, resulting in concentric hypertrophy and eventual diastolic dysfunction of the left ventricle secondary to LV stiffness and impaired relaxation. Late stages may be characterized by severe LV systolic dysfunction and dilatation. Echocardiography offers clinicians a quick, reliable, and inexpensive method of assessing changes in LV function resulting from hypertension.

<table>
<thead>
<tr>
<th>Classification</th>
<th>LVEF (Men)</th>
<th>LVEF (Women)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal LV function</td>
<td>52–72%</td>
<td>54–74%</td>
</tr>
<tr>
<td>Mild LV dysfunction</td>
<td>41–51%</td>
<td>41–53%</td>
</tr>
<tr>
<td>Moderate LV dysfunction</td>
<td>30–40%</td>
<td>30–40%</td>
</tr>
<tr>
<td>Severe LV dysfunction</td>
<td>&lt;30%</td>
<td>&lt;30%</td>
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</tbody>
</table>

Table 2: Echocardiographic findings according to LV diastolic dysfunction grades*

| LV relaxation LAP Mitral E/A ratio Average E/e' ratio Peak TR velocity (m/s) LA volume index |
|-----------------------------------------------|-----------------------------------------------|
| Normal Normal Normal ≥ 0.8 <10 <2.8 Normal |
| Grade I Impaired Low or normal ≥ 0.8 <10 <2.8 Normal or Increased |
| Grade II Impaired Elevated >0.8 to <2 10–14 >2.8 Increased |
| Grade III Impaired Elevated >2 >14 >2.8 Increased |

*Assessment of elevated left atrial pressure is more reliable when more than 2 or 3 criteria given in the table are present in a given patient in the absence of caveats mentioned in the text. A: Mitral inflow late diastolic/atrial wave by pulsed wave Doppler; E: Mitral inflow early diastolic wave by pulsed wave; e': Average of medial and lateral mitral annulus longitudinal velocities by tissue Doppler echocardiography; LA: Left atrium; LAP: Left atrial pressure; LV: Left ventricle; TR: Tricuspid valve regurgitation
Management of Hypertension in Pregnancy
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Introduction: Unlike other categories of hypertension, hypertension in pregnancy is lacking in evidence-base. Most of the recommendations are not backed by trial data. Moreover, benefits of treatment have not been proven, while the harmful effect of treatment on the fetus is well recognized.

Physiological changes in blood pressure during pregnancy: By the end of the first trimester there is usually a decrease in BP, secondary to the marked vasodilation. The fall is by 5 to 10 mm Hg. By the third trimester, BP rises to return to pre pregnancy values. In chronic HTN, BP changes follow this same pattern. So, some hypertensive women may actually become normotensive by the end of the first trimester of pregnancy.

Classification of hypertension in pregnancy: Hypertension in pregnancy may be classified into gestational hypertension, preeclampsia, chronic hypertension and chronic hypertension with superimposed preeclampsia. Preeclampsia is systolic BP more than 140 mm Hg and/or diastolic BP more than 90 mm Hg in previously normotensive women, occurring after 20 weeks of gestation associated with proteinuria (excretion of more than 0.3 gram of protein in 24 hr. urine collection) or with other systemic manifestations. Gestational hypertension is same, but with no proteinuria or systemic manifestations. Chronic hypertension is hypertension before pregnancy or before 20 weeks of gestation or hypertension persisting more than 12 weeks post-partum. Chronic hypertension with superimposed preeclampsia is new onset proteinuria or worsening proteinuria in the setting of hypertension before 20 weeks of gestation.

Chronic hypertension of pregnancy: Chronic hypertension of pregnancy is blood pressure ≥ 140 mm Hg systolic and/or > 90 mm Hg diastolic before pregnancy or before 20 weeks of gestation. History of use of antihypertensive medications before pregnancy or when there is persistence of hypertension for > 12 weeks after delivery is also considered chronic hypertension of pregnancy. Blood pressure may be normal in the first and second trimester and starts rising in the third trimester, suggesting gestational hypertension. However, persistence of hypertension beyond 12 weeks postpartum suggests chronic hypertension. The prevalence is about 3 to 5%. But the increasing levels of obesity and the increasing age at the time of pregnancy is likely to increase the prevalence of chronic hypertension also. Majority does well in pregnancy. Superimposed preeclampsia, however, leads to fetal growth restriction, placental abruption, preterm birth and increased likelihood of cesarean delivery.
Pre pregnancy care should include counseling about the pregnancy risks, optimization of antihypertensive regimens and implementation of lifestyle modifications such as sodium restriction, weight reduction, and adherence to Dietary Approaches to Stop Hypertension (DASH) diet. Given the need for volume expansion in pregnancy, strict sodium restriction is of concern.

Timing of delivery should be planned well in advance. In chronic HTN, but not on any medications, delivery at 38 to 39 weeks is advisable. In women on antihypertensive medications, delivery should be planned at 37 to 39 weeks. In difficult to control HTN, (requiring frequent medication adjustment), delivery should be even earlier, by 36 to 37 weeks. When there is superimposed preeclampsia, delivery is best at 37 weeks of gestation or earlier. Given the benefits of breast-feeding, women with chronic hypertension, including those on antihypertensive medications, should be encouraged to breast-feed. Almost all hypertensive medications are measurable in breast milk. But, in spite of that, most antihypertensive, including ACEIs, are usually compatible with breast-feeding. Atenolol should be used with caution. Diuretics are also not advised during breast-feeding because of the concern that they may decrease breast milk production.

Preeclampsia: Elevated blood pressure and proteinuria after 20 weeks of gestation, often accompanied by maternal organ injury and fetal compromise from placental dysfunction characterize preeclampsia. While in the general population, the risk is 3% to 5%, in chronic hypertension it raises to 17% to 25%. It is challenging to diagnose preeclampsia in women with chronic hypertension, because blood pressures are already elevated and proteinuria may be present before pregnancy. One should think about superimposed preeclampsia when (1) blood pressure increases in pregnancy, (2) the presence of new-onset proteinuria, (3) worsening of pre pregnancy proteinuria or (4) laboratory abnormalities (thrombocytopenia, elevated liver function tests, and increasing serum creatinine) are present.

The major risk factors for preeclampsia are past history of preeclampsia, nulliparity, pregestational diabetes, chronic hypertension, obesity, family history of preeclampsia and multiple gestations.

The major pathophysiological hallmark of preeclampsia is placental dysfunction. This is proved by the fact that delivery of the placenta is almost always curative. Subsequently, there is widespread maternal endothelial dysfunction and infarcts, atherosis, thrombosis, and signs of chronic inflammation in placenta. The renin-angiotensin-aldosterone axis is also affected. In a normal pregnant woman, vasculature demonstrates decreased responsiveness to vasoactive peptides such as angiotensin II and epinephrine. In preeclampsia, this is lost and there is hyper responsive to these hormones. It is postulated that there may be agonistic AT1 receptor autoantibodies. Normal placentation requires the development of fetal immune tolerance by the mother. An immune mal adaption has also been proposed. There is failure of the normal development of the maternal–fetal interface in the placenta.
There are implications for later CV Disease also. Within 7 years of a pregnancy with preeclampsia, 20% will develop HTN or micro albuminuria and within 14 years more than 50% will have HTN, three to four times the risk found in women without preeclampsia. For both preeclampsia and gestational HTN, overall long-term risk of CV and cerebrovascular disease is twice that of age-matched controls. American Heart Association considers preeclampsia, gestational diabetes, and pregnancy-induced hypertension as risk factors for CVD. In addition, children born from pregnancies affected by preeclampsia are more likely to suffer from metabolic syndrome, CVD, and HTN at earlier ages.

Gestational hypertension: New onset of hypertension at \( \geq 20 \) weeks of gestation in the absence of proteinuria and no new signs of end organ dysfunction characterize gestational hypertension. The blood pressure readings should be documented on at least two occasions, at least four hours apart. This is the most common cause of hypertension in pregnancy. Severe gestational hypertension is defined as systolic blood pressure \( \geq 160 \) mmHg and/or diastolic blood pressure is \( \geq 110 \) mmHg. Usually they become normotensive within the first postpartum week. The diagnosis is changed to (1) preeclampsia, if proteinuria or new signs of end organ dysfunction develop (2) chronic HTN, if BP elevation lasts \( \geq 12 \) week's postpartum and (3) transient hypertension of pregnancy, if BP returns to normal by 12 weeks postpartum. 10 to 50 % of gestational hypertension develops preeclampsia. Clinical characteristics that predict an increased risk for progression to preeclampsia include gestational age less than 34 weeks at diagnosis, mean systolic blood pressure >135 mmHg on 24 hour blood pressure monitoring, abnormal uterine artery Doppler velocimetry and elevated serum uric acid level (>5.2 mg/dL).

Whether low dose aspirin prevents progression of gestational hypertension to preeclampsia is unclear. Low dose aspirin has been found to produce modest reduction in preeclampsia and its sequelae in the second trimester. Thus there is no evidence to begin aspirin for prevention of preeclampsia after 20 weeks of gestation. Therefore do not prescribe it for women with gestational hypertension, since it is diagnosed only after 20 weeks of gestation. Low dose aspirin can be given in future pregnancies with history of gestational hypertension And blood pressures \( \geq 160/110 \) mmHg.

**Treatment:** Sodium restriction and/or diuretics has not been found to make any difference in the incidence of the disease. Low dose aspirin, in the first trimester in high-risk patients reduces the risk of preeclampsia by up to 50% and may improve associated fetal and maternal outcomes. There is no evidence that pharmacologic treatment of mild HTN can reduce the incidence of preeclampsia. On the other hand, pharmacologic treatment of mild HTN in pregnant women increases the likelihood of IUGR. The treatment goal in pregnancy is to reduce maternal morbidity. It is very questionable whether BP control reduces superimposed preeclampsia, placental abruption, or growth restriction or improve neonatal outcome. Moreover no antihypertensive are categorized as “class A”.

ACOG recommends that BP in uncomplicated HTN should be reduced to between 120/80 and 160/105 mm Hg. It is recommended to initiate antihypertensive treatment when BP is consistently >160 mm Hg systolic and/or >105 mm Hg diastolic. When there is preexisting end-organ damage from chronic hypertension, lower threshold (>139/89 mm Hg) may be justifiable. In general, commence antihypertensive therapy when blood pressure exceeds 150/100 mmHg with the aim of maintaining blood pressure below this level. Initiate treatment earlier when there are signs of cardiac decompensating or cerebral symptoms (e.g. severe headache, visual disturbances, chest discomfort, shortness of breath, confusion) and in younger women whose baseline BP was low (less than 90/75 mmHg). In these patients target SBP to 130 to 150 mm and DBP to 80 to 100 mm Hg.

For preeclampsia definitive treatment is delivery. Timing of delivery is based upon gestational age, the severity of preeclampsia, and maternal and fetal condition.

Drugs in Pregnancy: All antihypertensive drugs cross the placenta. Methyldopa is the most widely used antihypertensive in pregnant women. It is considered a first-line or co–first-line drug because of the large amount of safety data resulting from its use in pregnancy since the 1960s. Among beta-blockers, Labetalol has both alpha and beta-adrenergic blocking activity and is considered as alternative first-line or second-line agent. Data is sparse for calcium channel blockers, but is considered safe for use in pregnancy. Women of childbearing age who are on ACE inhibitors or ARBs should be switched to another class of agent before conception when planning pregnancy. Intravenous Hydralazine has been extensively used in preeclampsia. Use of Thiazide diuretics is a source of controversy. It can be continued in chronic hypertensives that were taking it prior to pregnancy, but not generally used in preeclampsia. Clonidine is an effective drug for treatment of mild hypertension, but has bothersome side effects. Drugs to be avoided in pregnancy are ACE inhibitors, ARBs, direct renin inhibitors and Nitroprusside.

**Conclusion:** Hypertension in pregnancy is likely to increase in prevalence as incidence of obesity increases and older women become pregnant. Classification is based on the time of onset of hypertension. The threshold for treatment and the goals are higher than non-pregnant women because the benefits of treating mild HTN are questionable. Methyldopa and labetelol has large amount of data available, and hence considered drugs of choice.
Heart Failure management is indeed complex if the patient has intravascular volume depletion or Acute Kidney Injury or Chronic Kidney Disease. It gets more complex if there is right heart failure with or without atrial fibrillation. In the presence of altered Heart Rate and or Mean Arterial Blood pressure with diastolic and or systolic heart failure, management becomes difficult with few choices and deprivation of life saving medications. Cardiac hemodynamic measurements invasively and /or non-invasively give us a glimpse into the perturbances intracardiac long before decompensation occurs. In this case based discussion, we will have a dialogue on an algorithm grounded approach to optimize therapy and impact outcomes.

Chikungunya / Dengue / Zika: How to Differentiate and Manage

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While we are still to get rid of Anopheles-borne malaria, we are seeing the spread of many Aedes-borne illnesses like Dengue, Chikungunya and now Zika. While the physicians in India are familiar with the first three, Zika is a relatively new condition that they will see in increasing numbers. We will review the origin and spread of Zika and some of the most serious manifestations. We will then summarize some key clinical features that that distinguish it from the other Aedes-borne conditions. We will also list some essential information to give to patients traveling to areas at risk of Zika.
The passage of gastric contents into the esophagus is a normal physiologic process. Most episodes are brief and do not cause symptoms, esophageal injury, or other complications. Gastroesophageal reflux becomes a disease when it either causes macroscopic damage to the esophagus or causes symptoms that reduce the quality of life.

Definition: GERD is defined as a condition that develops when the reflux of stomach contents causes troublesome symptoms and/or complications.

GERD is classified based on the appearance of the esophageal mucosa on upper endoscopy into the following:

A. Erosive esophagitis
B. Nonerosive reflux disease

Indication for endoscopy in GERD

1. When diagnosis is unclear
2. In Patients with heartburn and alarm features
3. Patients with severe erosive esophagitis on initial endoscopy will require follow up endoscopy after 2 months of PPI therapy
MANAGEMENT OF GERD

The optimal approach to the management of gastroesophageal reflux disease (GERD) is controversial. Usually management of patients with GERD is based on the frequency and severity of symptoms and the presence of erosive esophagitis on upper endoscopy, if previously performed.

A. We suggest lifestyle and dietary modification in all patients with GERD
B. In patients with mild and intermittent symptoms of GERD who are naïve to treatment, we suggest as needed low dose H2RAs
C. Concomitant antacids are appropriate if symptoms occur less than once a week.
D. If symptoms of GERD persist even with twice daily H2RA, discontinue H2RAs and initiate once daily proton pump inhibitors (PPIs) at a low dose and then increase to standard doses if required for symptom control.
E. In patients with erosive esophagitis, it is recommend to start initial acid suppressive therapy with standard dose PPI once daily
F. In patients with frequent GERD symptoms (two or more episodes per week) and severe symptoms that impair quality of life, we suggest standard dose PPI once daily.
The question of whether or not to ablate Ventricular Tachycardia in a patient is appropriately answered by considering the following clinical contexts.

1. Idiopathic ventricular tachycardia (VT)
2. VT in Structural Heart Disease (SHD)
3. VT in presence of implantable cardioverter-defibrillator (ICD)
4. VT storm

Patients with structural heart disease [including prior myocardial infraction (MI), dilated cardiomyopathy, arrhythmogenic right ventricular cardiomyopathy/dysplasia (AVRC/D)]

Catheter ablation of ventricular tachycardia (VT) recommended

1. For symptomatic sustained monomorphic VT (SMVT), including VT terminated by an ID, that recurs despite antiarrhythmic drug therapy or when antiarrhythmic drugs are not tolerated or not desired;*
2. For control of incessant SMVT or VT storm that is not due to a transient reversible cause;
3. For patients with frequent Premature ventricular contractions (PVCs), Nonsustained ventricular tachycardia (NSVTs), or VT that is presumed to cause ventricular dysfunction;
4. For bundle branch reentrant or interfascicular Vts;
5. For recurrent sustained polymorphic VT and ventricular fibrillation (VF) that is refractory to antiarrhythmic therapy when there is a suspected trigger that can be targeted for ablation.

Catheter ablation should be considered

1. In patients who have one or more episodes of SMVT despite therapy with one of more Class I or III antiarrhythmic drugs;*
2. In Patients with recurrent SMVT due to prior MI who have LV ejection fraction >0.30 and expectation for 1 year of survival and is an acceptable alternative to amiodarone therapy;*
3. In patients with haemodynamically tolerated SMVT due to prior MI who have reasonably preserved LV ejection fraction (>0.35) even if therapy have not failed antiarrhythmic drug therapy.*
Patients without structural heart disease
Catheter ablation of VT is recommended for patients with idiopathic VT
1. For monomorphic VT that is causing severe symptoms.
2. For monomorphic VT when antiarrhythmic drugs are not effective, not tolerated, or not desired.
3. For recurrent sustained polymorphic VT and VF (electrical storm) that is refractory to antiarrhythmic therapy when there is a suspected trigger that can be targeted for ablation.

VT catheter ablation is contra-indicated
1. In the presence of a mobile ventricular thrombus (epicardial ablation may be considered);
2. For asymptomatic PVCs and/or NSVT that are not suspected of causing or contributing to ventricular dysfunction;
3. For VT due to transient, reversible causes, such as acute ischemia, hyperkalemia, or drug-induced torsade de pointes.

*This recommendation for ablation stands regardless of whether VT is stable or unstable or multiple VTs are present.
Self Medication via Internet: A Hazard
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“Technological advance has prompted the common man to search the internet for health issues in an attempt to diagnose and treat their ailments. It could be economical and convenient but can be hazardous. It could lead to over or under diagnosis and medicinal adverse effects. Ideally utility of the information can be made by searching the net after the physician gives the correct diagnosis.”

Diabetic Eye Diseases: How & what to Look inside Eyes: A Primer for Physicians
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Diabetes is a disease which affects almost all parts of the eye; from conjunctiva to retina. Diabetic retinopathy being the most well-known. In this presentation we are also highlighting other eye manifestations commonly seen in diabetics, how to diagnose them and give primary treatment. Diabetic eye diseases have been categorised symptom wise for better understanding and practicality.

MDR XDR TB
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Drug-resistant tuberculosis is a growing problem faced by all. There are some isolates which have been found to be resistant to all the commonly available anti-tuberculous medications (which can be tested in vitro for susceptibility). Diagnosis of drug-resistant isolates requires a strong support from microbiology in the forms of molecular tests like Gene expert and LPA Hein, and the gold standard TB Culture. At least 4 fully susceptible drugs have to be incorporated in the treatment of MDR and XDR TB. Duration of treatment may range from 18 months to years depending on the pattern of resistance and the site of TB. A lot of research is going on to shorten the duration and decrease the number of drugs in the treatment of such cases. There have been few recent recommendations in this regard too.
Approach to Urine - Infection & Differential Diagnosis: An Algorithm for Physicians
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Every pus cell in urine is not infection. Men with febrile UTI should be investigated promptly and treated in evidence based manner. Asymptomatic bacteriuria not require treatment unless pregnancy or patient undergoing for surgical intervention. Surgical Management should be depending upon cause of UTI so try to find out cause of UTI along with cause of fever.

When ANA Test is Positive : What Next?
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My talk will give a brief overview of the clinical approach one should follow when a patient presents with nonspecific complaints and is found to have ANA positivity. I will discuss the spectrum of clinical conditions where this test comes positive and when to consider a positive test clinically significant. In patients with connective tissue disease, we will discuss the sequence of further investigations. Overall, ANA should be considered as a screening test only, which opens the window to wide spectrum of autoimmune diseases.
Humanising ICU Care

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In this intolerant society can’t we develop a tolerable ICU experience for humans?
I would like to highlight few points where we can improve and make ICU stay more human not only for patients but for healthcare workers also.

1. Improved communication
2. Improve patient wellbeing and satisfaction
3. Active family involvement
4. Taking care of professionals
5. Prevention and management of Post ICU Syndrome
6. Infrastructure improvement
7. Skills training
8. Management of terminal situation
9. Open door ICU

Ref: Visit / Search humanizing ICU care on Google...
Know Basics, Even if it's Not your Cup of Tea: Care of Mechanically Ventilated Patient

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The beginning of modern-day mechanical ventilator support or critical care medicine started with the idea and execution of mechanical ventilator support given through hole in wind-pipe to poliomyelitis patients with bulbar weakness in early 1950s (Copenhagen, Denmark). Since then mechanical ventilator support, despite variability in its understanding and application in clinical practice by different specialist and for diverse indication, it remains mainstay for supporting intensive care unit (ICU) patient with advanced but reversible cardio-pulmonary or airway problems.

Still, there exists a lot of ignorance, misbelief on part of general population (family of patient) and inexperience and disbelief on part of non-critical care physician involved in such care.

Non-critical care physician can simply understand basics of mechanical ventilators and one should, in era of advanced cardio-pulmonary supports like extracorporeal membrane oxygenation (ECMO) and left ventricular assist device (LVAD). Simple understanding of

(a) Goals/indication of mechanical ventilation.
(b) Basic care, monitoring to avoid possible harms,
(c) Weaning options are very basic to achieve competent care with holistic approach as a team in ICU. Disseminating this knowledge, facts and science may help to establish confidence of treating team and family.
Clinical Genetics is a specialty in which clinicians evaluate and treat individuals of all ages with known or suspected genetic disorders, or who are at risk, to develop such a condition. As an internal medicine specialist in genomic era, it is imperative to have knowledge about this branch of medicine. Clinical Genetics has drawn closer in existence to all branches of adult medicine including oncology, gynecology, cardiology, neurology and dermatology.

Breast, ovarian and colon cancers have a hereditary component and thus genetic testing aids in appropriate management and identification of family members at risk. Pharmacogenomics aims at understanding how genetic variants influence drug efficacy and toxicity. Such studies reveal how genetic variation across individuals affects a drug’s pharmacokinetics and pharmacodynamics. The ability to predict how a cancer patient will respond to a particular treatment regimen is the ambitious goal of personalized oncology.

Genetics consultation is needed when there are concerns regarding the advanced maternal age, concerns about genetic disease because of ethnicity such as thalassemia, sickle cell disease or family history of any genetic condition/intellectual disability/birth defects. Huntington disease, Myotonic dystrophy, muscular dystrophy, Charcot-Marie Tooth disease and ataxia are few other important neurological conditions where genetic conditions are essential. Two or more family members with the same type of cardiovascular condition, arrhythmias, cardiomyopathy, enlarged aorta or aortic aneurysm in the chest at a young age (<60) and a blood relative who died from a sudden cardiac death are few of the indications for genetic testing in cardiovascular diseases.

Newer technologies of genetic analysis such as “next generation sequencing” are a boon to clinical community. The expansion of knowledge related to genetics is changing our understanding of pathophysiology and influencing our classification of diseases. Awareness of genetic etiology can have an impact on clinical management, including prevention, screening, and treatment of a range of diseases. Primary care physicians are relied upon to help patients navigate testing and treatment options. Consequently, as a need of society, we must understand the genetic basis for a large number of genetically influenced diseases.
Skin Manifestation of Internal Diseases
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The various organ systems of the body, including the skin, are closely interlinked in their normal functioning. It therefore follows that many systemic illnesses will produce changes in the skin, which happens to be the organ most accessible to examination. On careful evaluation, some of these changes may point to the correct systemic diagnosis.

Cutaneous changes in systemic diseases encompass a spectrum ranging from the just discernible to the florid. Their prompt identification followed by appropriate investigations may prove timely in many instances.

Awareness of the skin findings of the internal disease is therefore important for clinician in general

Boon to Acute Ischemic Stroke: Mechanical Thrombectomy
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Acute Ischemic Stroke
- Case
- Types of Stroke
- Imaging Modality
- What is NIHSS?
- Window period and I.V. Thrombolysis
- Role of Mechanical thrombectomy
Thyroid Cancer Triumphs over Butchery

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Thyroid cancer represents a spectrum of diseases. At one end of the spectrum there is papillary carcinoma of the thyroid; while at the other end of the spectrum there is anaplastic thyroid cancer (universally fatal disease). Even though there are approximately 66,000 new patients with thyroid cancer seen every year in the United States, the mortality from thyroid cancer has essentially remained unchanged over the last two decades. The incidence of thyroid cancer is probably most rapidly increasing in the United States, especially in women. Whether this is related to true increasing incidence of thyroid cancer or incidentalomas is unclear. A variety of nuances have been recognized in the last decade in thyroid cancer.

One of the major advances in the management of thyroid cancer is the use of thyroglobulin. If the patient has undergone total thyroidectomy and radioactive iodine ablation, the rising thyroglobulin invariably indicates the presence of recurrent or metastatic disease. The recurrent disease in the thyroid bed can be very well documented with appropriate imaging studies including an ultrasound and ultrasound-guided needle biopsy. The ultrasound has been a great tool in the follow-up of patients with thyroid cancer both for identification of the local recurrence in the thyroid bed and metastatic disease in the lymph nodes. The other major nuance in the management of thyroid cancer is the availability of Recombinant TSH (Thyrogen) which can be used for radioactive iodine dosimetry and in selected cases, on a compassionate ground, for ablation. Clearly, this has changed the quality of life of patients who are undergoing radioactive iodine dosimetry. The patient does not have to become hypothyroid anymore and they can be easily evaluated for radioactive iodine dosimetry with Thyrogen. The fine-needle aspiration biopsy continues to be the mainstay of diagnostic evaluation of a patient presenting with a thyroid mass. A variety of immunohistochemical studies including molecular markers could be performed on fine-needle aspiration biopsy; however, in the future it is quite likely that we will be able to perform appropriate molecular markers on fine-needle aspiration biopsy specimen and define the nature of the primary tumor and plan treatment appropriately.
There continues to be a long term battle in the management of thyroid cancer as to the routine utility of total thyroidectomy versus less than total thyroidectomy. Our understanding of thyroid cancer has improved considerably over the last two decades with the understanding of the prognostic factors and risk group analysis. At Memorial Sloan-Kettering Cancer Center we have identified the prognostic factors such as grade of the tumor, age, distant metastasis, extrathyroidal extension, and size of the tumor. Based on these prognostic factors we are able to divide our patients into low and high risk groups. The low risk group patients generally are younger than 45 with a tumor less than 4 cm and good histology. The high risk patients include patients above the age 45 with large tumors, more than 4 cm or with extra thyroidal extension or high grade histology and distant metastasis. Even though many other institutions have divided their patients into low and high risk groups, we have divided our patients at Memorial Sloan-Kettering Cancer Center including an intermediate risk group where a young patient may have aggressive tumor or an older patient generally with a small tumor. The understanding of these risk group definitions is very crucial in the overall management and follow-up of patients with thyroid cancer. In the low risk group one can easily treat the patient with lobectomy and the role of radioactive iodine in these patients remains unclear and undefined. However, in the high risk group one would be quite aggressive not only doing total thyroidectomy and paratracheal clearance, but using radioactive iodine to its full dose and in select cases, where the patient may have a poorly differentiated tumor, with the use of external radiation therapy. In the intermediate risk group the decision regarding the extent of thyroidectomy and adjuvant therapy needs to be made based on the factors related to the tumor and its prognosis.

The management of neck nodes generally includes paratracheal clearance in all patients with suspected thyroid cancer. If there are no obvious enlarged lymph nodes in the paratracheal area this area is not dissected. However, if there are suspicious nodes a complete paratracheal clearance is done and the jugular vein is evaluated for any obvious nodes. In patients who present with clinically palpable neck node metastasis a modified neck dissection is usually performed. Subsequent to the surgery the decision regarding radioactive iodine is made based on the prognostic factors and risk group analysis as described above. The patients are usually followed by clinical examination, occasionally ultrasound of the thyroid, and serum thyroglobulin levels. If the serum thyroglobulin continues to rise, most of the time the disease is noted in the lymph nodes in the neck and an ultrasound of the neck will identify such enlarged lymph nodes. An ultrasound-guided fine-needle aspiration biopsy will confirm the presence of metastatic disease in the neck at which time a modified neck dissection is performed. The modified neck dissection for thyroid cancer includes removal of lymph nodes at level II, III, IV, and V without removing the sternomastoid muscle, internal jugular vein and accessory nerve. The incidence of metastatic
disease to level I am quite rare and generally the submandibular area is not dissected to avoid injury to the lower division of the facial nerve.

The understanding of the pathology of thyroid cancer is very crucial to distinguish between poorly differentiated thyroid cancer and well differentiated thyroid cancer. A variety of pathological variations have been noted in recent years such as tall cell, insular, trabecular, scirrhous, etc. These poorly differentiated tumors generally behave much more aggressively and will require aggressive treatment.

One of the most crucial findings in the management of thyroid cancer is extra thyroidal extension. Whenever there is a tumor invading the surrounding structures those areas need to be resected completely for gross total tumor excision which may mean removal of the strap muscles, recurrent laryngeal nerve, or the tracheal wall or esophageal musculature. If there is intraluminal disease extension into the trachea, a sleeve resection should be considered with primary end-to-end anastomosis of the trachea. We strongly feel that the extrathyroidal extension is a major prognostic factor to avoid local recurrence in the central compartment of the neck.

In recent years there has been an enormous interest in molecular markers and molecular analysis of the thyroid tumors, wherein, the comparative genomic hybridization and other technologies such as DNA array have been used. Based on these molecular analyses one can now develop the progression of anaplastic thyroid cancer from a benign follicular thyroid cell. Thyroid cancer continues to generate considerable debate and controversy. The controversy revolves mainly around the diagnostic evaluation and the therapeutic approaches related to extent of thyroidectomy. However, the recent understanding of the prognostic factors and risk groups should direct appropriate management of well differentiated thyroid cancer.

The recent ATA guidelines are based on biology of thyroid cancer and there is more emphasis on observation of micro-carcinoma, lobectomy and selective use of RAI based on risk-group analysis “less is more”. We need to adhere to “first do no harm”, “primum non nocere”.
Approach to Oral Cancer

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Oral cancer is the 6th most common cancer worldwide and is more prevalent in geographic regions of the world where oral consumption of tobacco is high. Alcohol and tobacco remain known risk factors for development of oral cancer. This lifestyle leads to the development of pre-malignant lesions in many patients, which go on to become invasive carcinoma. Thus a clinical as well as a genetic tumor progression model for oral cancer is established where progressive genetic mutations are identified from normal, to atypical, to dysplasia to in situ and eventually invasive carcinoma. This observation allows development of preventive strategies, and offers advantage from screening programs to treat pre-malignant lesions, before development of invasive carcinoma. Clinical assessment of the primary tumor requires careful examination of the oral cavity and palpation of the lesion to assess the depth of invasion into the underlying soft tissues. It is well known that the third dimension of the tumor is equally important as are the surface dimensions. Depth of tumor invasion is now incorporated into the T staging of the primary oral cancer. Factors impacting upon selection of treatment include those related to the primary tumor, regional lymph nodes, as well as patient factors and physician factors. Surgery remains the mainstay of treatment of oral cancer. Assessment and management of the mandible is paramount in selecting an appropriate surgical approach for resection of the primary tumor. Similarly, management of cervical lymph nodes is integral to the overall treatment plan. The risk of nodal metastasis is dependent on the T stage of the primary tumor as well as the primary site and location. Securing negative margins of resection is fundamental to a successful surgical endeavor. Reconstruction of the surgical defect for surface lining as well as the mandible is also critical components of the overall surgical treatment plan. The radial forearm free flap for surface lining and soft tissue repair and fibula for mandible reconstruction remain the current standards of care for reconstruction in the oral cavity. The need for adjuvant therapy is based on various pathological factors related to the primary tumor and cervical lymph nodes. The most important amongst these are the status of resection margins and the presence of extra nodal extension from metastatic disease in cervical lymph nodes. Disease specific survival depends on the stage of disease at the time of treatment offering nearly 90% five year survivals for Stage I oral cancer which drops down to approximately 45% for Stage IV disease. Cause specific survival is also dependent on N status with 86% 5 year survivorship for N0 disease dropping down to 42% for patients with multiple nodal metastases Local / regional recurrence remains the most predominant sites for treatment failure with a median time to recurrence of approximately 9 months. Over the years, improvement in results of treatment of oral cancer is seen due to early identification and treatment of nodal metastases, securing negative margins of resection and employment of appropriate adjuvant therapy. Contemporary surgical techniques have allowed preservation or restoration of form and function leading to better quality of life.
Parotid Tumors

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The salivary glands are divided into major and minor salivary glands. The major salivary glands include parotid, submandibular and sublingual salivary glands. The tumors of the sublingual salivary glands are rare and often confused with tumors of the floor of the mouth. There are approximately 500 to 600 minor salivary glands distributed along the mucosa of the upper aero digestive tract starting from the lips, nasal cavity, to the lower end of the esophagus and pulmonary bronchioles. The majority of the minor salivary glands are present on the hard palate and any tumor of the hard palate should be considered a minor salivary gland tumor unless proven otherwise. Even though salivary gland tumors are not very common, they form approximately 3 to 6% of all tumors of the head and neck sites. The distribution among the major salivary glands includes parotid gland tumors-65%, while the minor salivary gland tumors form 27%. Tumors of the submandibular gland are rare and form approximately 8% of all salivary tumors. It is interesting to note that as the salivary gland becomes smaller, there is a higher incidence of the tumor being malignant. Approximately 80% of the parotid tumors are benign while 80% of the minor salivary gland tumors are malignant. The distribution of benign and malignant tumors of the submandibular salivary glands is approximately 50%.

The commonest benign tumors of the salivary glands include pleomorphic adenoma, Warthin’s tumor, and oncocyto. Classification of malignant salivary tumors has generated considerable debate among various pathologists and a variety of classification schemes have been developed. However, from a practical standpoint, the most common malignant tumors include mucoepidermoid carcinoma, adenocarcinoma, malignant mixed tumor, adenoid cystic carcinoma and acinic cell carcinoma. The most frequent malignant tumor of the salivary gland includes mucoepidermoid carcinoma in the parotid gland while squamous cell carcinoma and anaplastic tumors of the parotid are extremely rare. A diagnosis of squamous cell carcinoma of the parotid requires considerable clinical judgment to rule out any skin tumors or metastatic squamous cell carcinoma from the skin of the temple and head and neck region.
Among other malignant tumors, the most frequent malignant tumors of the submandibular salivary gland and minor salivary glands is adenoid cystic carcinoma. There appears to be considerable interest in this histologic variety mainly related to high incidence of perineural spread, high incidence of local recurrence, and current interest in treating these tumors with postoperative radiation therapy with special emphasis on neutron therapy, especially for adenoid cystic carcinoma.

The diagnostic workup of salivary tumors includes a good history and physical examination and appropriate imaging studies including CT or MRI scans, depending upon the extent of the disease. Most of the time, for routine parotid tumors, imaging studies are not necessary, however if the tumor appears to be fixed to the surrounding structures or there is a facial nerve weakness, CT scan or MRI scan will be of help to evaluate the third dimension of the tumor. The role of fine needle aspiration biopsy generates considerable debate, mainly because it may be very difficult to distinguish between benign and malignant salivary tumors on fine needle aspiration alone. However, the fine needle aspiration biopsy is extremely helpful to rule out salivary from non-salivary pathology. There are several other conditions in the salivary gland region such as chronic sialadenitis, lymphadenitis, and metastatic tumors which need to be distinguished from primary salivary tumors. The overall incidence of regional lymph node involvement is approximately 20 to 24% and the regional microscopic lymph node involvement in N0 stage is quite infrequent. Therefore, elective neck dissection is generally not indicated in most of the malignant salivary tumors. However, in a high grade tumor or advanced salivary tumors, especially when the neck is entered for exposure, consideration may be given to supraomohyoid neck dissection, mainly for sampling of the lymph nodes for consideration of postoperative radiation therapy.

A majority of parotid tumors originate in the superficial lobe, however, rarely, the tumors may originate in the accessory parotid tissue or in the deep lobe of the parotid gland. Occasionally the deep lobe parotid tumors may present as oropharyngeal mass and may be difficult to distinguish from parapharyngeal tumor.

The treatment of parotid gland tumors revolves around the preservation of facial nerve function. Usually the facial nerve can be preserved if it is functioning preoperatively. The standard surgical procedure includes superficial parotidectomy with identification and preservation of the branches of the facial nerve. When the tumor involves the deep lobe of the parotid gland, generally resection is accompanied by superficial parotidectomy and carefully retracting the main trunk and the branches of the facial nerve. Rarely, a small branch of the facial nerve or the main trunk may have to be sacrificed if the tumor encircles the entire nerve and preservation of the facial nerve may leave behind gross tumor.
Careful discussion preoperatively with the patient and family is essential in the rare event that the nerve may have to be sacrificed. However, functioning nerves rarely needs to be sacrificed. Occasionally the deep lobe parotid tumor presenting as a parapharyngeal mass may require mandibulotomy for adequate exposure and resection of the deep lobe parotid tumor.

Various prognostic factors in malignant salivary gland tumors are well defined, such as location of the tumor, stage of the disease, histology, and grade of the tumor, the presence or absence of lymph node metastasis. Among all prognostic factors, stage appears to be the most important. Postoperative radiation therapy is generally utilized for high grade, high staged tumors or in patients with facial nerve paralysis or lymph node metastasis. Adjuvant radiation therapy is generally indicated for adverse prognostic factors such as tumors more than 2-3 cm, positive or close margins, perineural infiltration, lymph node metastasis, or extensive soft tissue disease and grade of the tumor including extracapsular or lymphovascular invasion. There appears to be considerable interest from centers utilizing neutron therapy in the management of salivary gland tumors. However, there appears to be very high incidence of local complications related to neutron therapy. Clearly in advanced inoperable tumors, probably neutron therapy would yield better local control. The role of chemotherapy at this stage appears to be only palliative.
Qualifying Breast Cancer Surgery in Early Breast Cancer

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Early breast cancer is defined as a cancer that is confined to the breast/axilla and is small in size. Classically, it includes all in situ cancers and those that are less then clinical stage T2 and N1 with no distant metastases. The management of breast cancer and especially of early breast cancer (EBC) is predominantly surgical and other modalities merely either facilitate optimum surgery (clear margins) and/or prevent local recurrence. Is it necessary to qualify and assure a standardized treatment for EBC? The answer is an emphatic yes and as is true in any other cancer optimum surgery (R0 resection) is the bottom line and if this could be done with preservation of organ and function, it is an added achievement. There has to be a standardized approach in the early diagnosis, staging and management of EBC and this has to be quality assured in order to audit the results and improve the outcome in future. The issue of core biopsy being the gold standard and imaging having got standardized, the job of a breast surgeon is getting easier by day at one end and very complex at the other as the entire approach to this most common cancer of human race has undergone a revolutionary change due to better understanding of the tumor biology and outcome measures. One can be intrigued by the concept of T-size being of minimal consequence as compared to the biology and the classification of breast cancer is fast becoming more and more biological. The management therefore involves a multidisciplinary approach with decisions being taken in a tumor board to achieve the best outcomes. Breast conservation surgery is the standard of care in early breast cancer and every surgeon practicing breast surgery must be optimally trained in standardized techniques to achieve the optimum outcome each time that he manages this cancer. Therefore not only must the diagnostic approaches be standardized, the surgical management and the training of breast surgeons would need to be qualified in order to achieve reproducible and “surgeon proof” results.
Management of ARDS: Myths and Facts

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Overview
Acute Respiratory Distress Syndrome (ARDS) has been known and managed in ICUs for decades. Despite of years of experience, lots of myths and conflicts exist about its diagnosis and treatment. Despite of huge progress in engineering of modern ventilators, newer drugs and advanced health care and ICU facilities; mortality from ARDS still remains very high (20 to 40%). Myth of ARDS being progression of Acute Lung Injury still exists. The term ALI has been discarded. As per new Berlin definition (2013) ARDS is defined as: a) Acute onset (1 week or less) b) Bilateral opacities consistent with pulmonary edema must be present diagnosed radiography c) PF ratio $< 300$ mmHg with minimum PEEP of 5cmH2O and d) must not be fully explained by cardiac failure or fluid over load.

Etiology / Risk factors
ARDS can be caused by direct lung injuring mechanism or indirect injury as a part of systemic inflammatory response. It is a disbelief that ARDS can develop only following direct lung injury; it can also develop following indirect injury secondary to systemic inflammatory response from non-pulmonary pathology. Direct causes are Pneumonia (46%), Aspiration pneumonitis (29%), Lung contusion (34%), and fat embolism, near drowning, inhalational injury or reperfusion injury. Indirect causes are Non-pulmonary sepsis (25%), multiple trauma (41%), Massive transfusion (34%), Pancreatitis (25%) or Cardio-pulmonary bypass.

Management
There remains lots of Myths regarding modes of ventilations, pulmonary vasodilators therapy and various drug options which are considered to be beneficial without robust evidence to support its use. No drug has been proven to be convincingly beneficial in prevention or management of ARDS so far. Therefore, mainstay of treatment remains on treatment of primary cause; supportive care and rescue methods to optimize and maintain oxygenation and strategies aimed and minimizing further lung injury and avoiding as well identifying early and treatment of any complications.

Treatment of primary cause

It is crucial to diagnose and provide appropriate treatment of primary cause to minimize further impact on respiratory physiology and lungs e.g. drain collection, appropriate antibiotics for infection, resuscitate, and splint fractures. Quite often focus is shifted to oxygenation from primary pathology with deteriorating respiratory system but it is crucial to get control of primary trigger mechanism.

Approach to minimize further injury
Mechanical Ventilation: Only proven fact about mechanical ventilation is lung protective ventilation with baby lung technique. Rest all about modes of ventilation and high Vs. low PEEP are all myths. Amato and The ARDS network well demonstrated the benefits of lower tidal volume 6ml/kg to avoid volutrauma and avoidance of high plateau pressure over 30 mm of H2Os to avoid barotrauma \(^1,2\). Higher PEEP to reduce FiO2 requirement has not been proven to be beneficial but still remains current practice. Brower et al (ALVELI) and Meade et al (LOVS) showed no improvement in survival with high PEEP + low FiO2 Vs. low PEEP + High FiO2 \(^3,4\). In regards to mode of ventilation, PCV tend to be used more frequently to improve peak pressures but hasn’t been shown to have survival benefit. It is mean airway pressures and plateau pressures that matters not the pick pressures. Likewise Inverse ventilation hasn’t been proven of any survival benefits either and can expose patients to high airway pressure and hemodynamic instability. HFOV became flavor of the decade during beginning of 21st century but Ferguson ND et al (OSCILLATE) showed higher mortality with HFOV \(^5,6\).

Rescue Oxygenation: Various Rescue methods to improve oxygenation have been tried over years but apart from PRONE ventilation none of the other methods could improve survival rate and they remain nothing but the myths. Guérin et al (PROSEVA) demonstrated significant survival benefit with 16hours/day of prone ventilation in patient with severe ARDS and PF ration <1507. It involves lots of training to facilitate it and to avoid treatment related complication. Therefore it still remains a rescue therapy for severe cases in clinical practice where prone ventilation is not the routine practice. Several studies have suggested transient improve in oxygenation in ARDS with NO therapy; however no study has found meaningful benefit in terms of mortality or duration of mechanical ventilation benefit \(^8\). Recruitment maneuvers (e.g. PEEP 30-40cmH2O held for 30 seconds or staircase recruitment manoeuvre) can improve oxygenation but remains controversial and not used regularly till date. The ANZICS CTG’s PHARLAP study is currently in progress: a MCRCT looking at daily recruitment maneuvers with protective ventilation strategy

Pharmacological therapy: None of the pharmacological therapies have proven to be beneficial and they remains myths only, there is no fact about its usefulness. Surfactant replacement therapy is theoretically good and improves oxygenation but no improvement in mortality and also there are theoretical problems with distribution to alveoli. Glucocorticoids showed improvement in ventilator free days and shock however no improvement in mortality and increases incidences of weakness even if used early in disease process \(^9\)-11. Regular use of neuromuscular blockade is associated with more critical illness polyneuropathy with no survival benefits so is out of practice \(^12\). Neither of cytokine antagonism, NSAIDS, scavengers of O2 radicals or lisofylline has been shown of any benefit.

To conclude only facts about ARDS management are treatment of primary cause, lung protective ventilation, detection of any complication early with appropriate treatment and supportive care. There is enough evidence to support prone ventilation in severe cases. All other techniques like Pressure control ventilation, HFOV, inverse ratio ventilation, NO, Prostacyclins and all pharmacological therapy
are myths and there isn't enough evidence to support its superiority and are all used on personal preferences.


Fungus in Lung- A Formidable Challenge!
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Fungal affection of the lung may range from invasive fungal infections to chronic saprophytic forms to allergic mycoses. Invasion of the lungs by hyphal fungi like Aspergillus and Mucor; and yeasts like Cryptococcus, is mainly seen in immunocompromised patients. On the other hand, allergic and chronic forms may affect the normal host.

Diagnosis of invasive mycoses poses a challenge to the clinicians as it often requires invasive diagnostic procedures (to obtain samples for microbiology and histopathology) in immunosuppressed patients. Biomarkers and radiological characteristics help in making a 'non-invasive' diagnosis. Treatment includes antifungal agents, and often surgical intervention for source control, especially in cases of mucormycosis. The choice of antifungal agent depends on the type of infecting fungus. Duration of treatment is long. It may be prolonged to many months especially in patients on chemotherapy/other immunosuppression.

High degree of suspicion, earliest possible diagnosis and complete treatment improve the outcomes dramatically in these ‘challenging’ infections.
32 Years Male Patient with TRALI

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32 Year Old male patient residing at Rajasthan, had history of hematemesis before one week admitted at local Hospital Ajmer transfused blood products for low Hemoglobin and continue Hematemesis. Then during stay patient developed breathing difficulty and hypoxia so intubate and put on ventilator. Patient developed transfusion related acute lung injury. Then shifted at one of Hospital of Ahmedabad. At where UGI Scopy followed by embolization done. Patient UGI Bleeding stopped. But patient had persistent hypoxia on 100% Fio2 and 15 PEEP on ventilator. So they consult our ECMO team so we went there and evaluating all aspect we decided to patient put on ECMO support. We put patient on ECMO and then shifted patient to CIMS hospital via help of Local traffic police.

At CIMS Hospital we managed patient on ECMO and ventilator support, gradually wean from ECMO support and decanuulate on 10th day. Then after within 2 days we able to wean from ventilator. Patient shifted to ward on 17th Day. Patient discharged on 19th day of admission with hemodynamically stable condition.
Timing of Intervention in CHD - Indian Perspective

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With the advances in pediatric cardiac services over the last 50 years, today almost any congenital heart defect can be repaired or effectively palliated. In India an estimated 180,000 children are born with congenital heart disease (CHD) every year. At least a third of this number requires correction in infancy. Admittedly, the number of centers performing pediatric cardiac surgery is too few to meet this number, but new regional centers are coming up every year. The knowledge and understanding of CHD by the primary care providers is the key determinant in timely tertiary care delivery to the Indian child. Guidelines for timing of intervention for CHD in India must take into account delayed presentation; frequent co-morbidities and Indian results. Guidelines are provided for common lesions based on published data and Indian expert consensus.
A lot has changed in this decade and from a parent perspective there are more cardiac centers and financial options for them if they have a child who has heart disease. However, knowledge of dental hygiene, preconceptual folic acid as a possible preventive strategy and an understanding of genetics and recurrence risks remain low leading to the importance of the family physician or pediatrician in this triangle between parents and the cardiologists. The role of the family physician as counselor has enlarged and it is important for them to know the cardiac options available in their surrounding area as well as financial schemes that the family can access, for example the site http://www.nhp.gov.in/gujarat_pg which details the Mukhyamantri Amrutum (MA) Yojana providing health coverage for Rs 2 lakh/annum/family etc.

From the cardiologist perspective, there are many more decisions to be made from diagnosis (CT versus MRI versus cath) to management (no intervention to transcatheter procedures versus surgical intervention). The National committee guidelines on timing of intervention can be nationally followed so that all cardiologists are on the same page. For instance all large VSD’s must be closed latest by 6 months, small VSD’s need only be closed if they have more than one episode of endocarditis or develop cusp prolapse with aortic regurgitation and so on. The importance of 3 way discussions between the parents, the family physician and the cardiologist is of importance in todays world.
Team Building in Pediatric Cardiac Surgical Practice

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Pediatric Cardiac Surgery has grown to be a subspecialty in Cardiovascular Surgery across the world including India, more so since the last decade or so. Many dedicated pediatric Cardiac Units have sprung up in Unispecialty and Multispecialty Hospitals. Much unlike the Adult specialty, to achieve successful and excellence in outcomes in Pediatric Cardiac Surgery a well-knit team based care is essential as seen and shown in many units across the globe.

It is not a rocket science to appreciate why this is so.....!. Pediatric Cardiac Surgery encompasses medical and surgical treatment of congenital heart anomalies across the ages... from neonates to adulthood. The way to diagnose, understand the nuances of physiology at any given age, other physiological factors and co morbidities associated with age and the cardiac lesion, their interplay, surgical management and their post-operative care needs inputs from multiple specialists with varied skillsets. Commonly, a pediatric cardiac team consists of Pediatric Cardiologists, Pediatric Cardiac Surgeons, Anesthesiologists, Intensivists (pediatric and neonatal), Perfusionists, and Nurses.

To function efficiently... the Pediatric cardiac unit can be compared to the Rotary Wheel. Malfunction of one cog could wreck the function and derail the program. The other point to appreciate is that all cogs are equal and important and for proper function and the larger picture of the wheel and its function have to be kept in mind.

While leadership qualities are important in Team Building, free and unhindered cordial communication between team members, mutual regard and respect, punctuality, conflict resolution mechanisms, and empowerment of junior staff and Nurses are some of the salient features contributing to building a very cohesive team.

As the sayings go... ““A successful team is a group of many hands but of one mind””, and “"a chain is only as strong as its weakest link....!"”
It could not be truer for the delivery of care in a Congenital Heart Unit.
Inotrope Selection in CHDs

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Most infants and children undergo a period of reduced cardiac output following cardiac surgery. This stage is usually transient, the cardiac output normalizing after a period of time. During the period of reduced cardiac output infants and children need to be supported by appropriate inotrope support. Most inotropes have catecholaminergic properties and are associated with arrhythmias. Low dose adrenaline is most appropriate for severe systolic dysfunction-higher doses being associated with increased arrhythmias or increased afterload, thus being counterproductive. Inodilators are currently most popular - dobutamine being most frequently used. Milrinone has the added advantage of being a pulmonary vasodilator, thus being particularly useful in large left to right shunts or situations of pulmonary over circulation. More recently, milrinone has also been associated with post-operative arrhythmias. Levosimendan – a calcium sensitizer has been shown in preliminary studies to be of benefit in infants undergoing repair of congenital heart defects.
Assessment of left ventricular (LV) systolic function is a primary component of cardiology practice playing a pivotal role in diagnosis, risk stratification and therapeutic guidance. As such the assessment has undergone much recent advancement. The magic word for cardiologists has been the calculation of 2-D derived LV ejection fraction (LVEF) by volumetric method. However this quantification has been limited by some technical issues such as, LV geometric assumptions for calculation of volumes, frequent foreshortening of LV apex, restricted endocardial delineation for tracing, dependency on loading conditions, heart rate, LV contractility, abnormal septal motion etc. Hence the update has been on evolution of techniques which are partly load independent and less dependent on image quality. Some of the traditional methods include mitral ‘E’ point septal separation, Mitral annular plane systolic excursion, Tei index, LV fractional area change etc. However the main updates have been the development of speckle tracking, myocardial contrast echo, and 3-dimensional echo. In the last few years the role of myocardial deformation parameters like strain and strain rate has gained significant importance. It can be quantified by different techniques, the more important being 2-D and 3-D Speckle Tracking Echocardiography (STE). It is very sensitive method which can assess subclinical LV dysfunction. Among the various strain parameters, the most widely used has been global longitudinal strain (GLS). The normal value varies between -16 to -22%. Fig 1 shows a patient of LV dysfunction with GLS of -6.2%.

Fig 1: Speckle tracking in a patient with poor LV functions. Global longitudinal strain is significantly reduced.

Fig 2: Myocardial contrast echo showing good endocardial delineation.
Several studies have shown that myocardial contrast echo (MCE) improves image quality and allows for a more accurate assessment of LV volume and EF, decrease in inter and intraobserver variability. Almost 16.7% of patients have a change in LVEF of more than 10% after contrast enhancement. This is more pronounced in patients with poor baseline echocardiograms (Fig 2). It has a significant impact on patient management.

3-Dimensional echo has provided more precise and accurate estimation of LV volumes and function. The main advantages are avoidance of LV foreshortening and assumption of LV geometry. It has a better correlation with CMR which is considered to be a gold standard for evaluation of LVEF. The limitation is slight underestimation of LV volume, suboptimal 2-D imaging, cost effectiveness, etc.

Heart failure with preserved ejection fraction (HFpEF) is an important entity as its incidence is about 50% of all heart failure cases. Recently the updated guidelines have simplified diastolic function assessment as only four variables have to be assessed. The diagnosis is based on the following criteria:

- Signs and symptoms of heart failure
- A preserved EF of >50%. A new terminology has been added i.e. heart failure with mid range EF (HFmrEF) with an EF of 41-49%
- Elevated levels of NPs (BNP >35 pg/mL and/or NT-proBNP >125 pg/mL)
- Presence of raised LV filling pressure (LVEDP >16 mmHg, mean LA pressure >12 mmHg)
- Absence of cardiomegaly: LVEDVI < 97 mL / m², LVESV < 49 ml / m²

The four simplified variables to be assessed, in situations of raised LV filling pressure, are (a) mitral E/A ratio - >2.0 (b) tissue Doppler- average E/e’ > 14 (c) LA volume index - >34 ml/m² (d) tricuspid regurgitation jet velocity >2.8 m/sec)

Recently some more parameters like GLS, diastolic strain signals, inverse correlation between LA systolic strain and filling pressure have prognostic value. But there are technical limitations and more research work is needed.
Echo in Pre-Operative Risk Assessment and Use of TEE during Cardiac Surgery

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A recent survey among cardiac anesthetists demonstrated that Transeosophageal echocardiography (TOE) has become a common part of perioperative care in cardiac surgery, and that it is mostly performed and interpreted by the anesthetist themselves. In cardiac surgery TOE provides new and important information regarding cardiac pathology in many patients, and results in significant changes in both surgical and anesthetic management. The avoidance of unnecessary operations on the basis of intraoperative TOE findings further underscores the benefit and the cost effectiveness of routine TOE in cardiac surgery1. The impact of TOE on the clinical management of patients undergoing non-cardiac surgery appears to be of equivalent importance.

Routine diagnostic TOE in the echocardiography laboratory is performed in awake patients under topical anesthesia of the oropharynx and in the left lateral decubitus position. By contrast, perioperative TOE is usually performed in anaesthetized and intubated, sedated, or unconscious patients in the operating theatre, post anesthesia recovery room, intensive care unit, or emergency room, with the patient positioned supine. It can be also conducted out in awake patients or during resuscitative efforts. In most cases, however, perioperative TOE is an elective diagnostic

<table>
<thead>
<tr>
<th>TABLE 1: Revised Basic Transeosophageal Echocardiography Examination</th>
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<tr>
<td>Pre CPB views Midesophageal AV short axis</td>
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<td>Midesophageal AV long axis (color flow Doppler of AV)</td>
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<td>Midesophageal bicaval</td>
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<td>Midesophageal RV inflow – outflow (color flow Doppler of PV)</td>
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<td>Midesophageal four chamber (color flow Doppler of MV and TV)</td>
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<td>Midesophageal two chamber view</td>
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<td>Transgastric midshort axis Transgastric two-chamber</td>
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<td>Seperation from CPB views</td>
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<td>Midesophageal four – chamber (color flow Doppler of MV and TV)</td>
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<td>Transgastric two-chamber XAMINATION</td>
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<td>Post – chest closure views</td>
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<td>Transgastric midshort axis</td>
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and monitoring procedure and the probe is inserted following the induction of anesthesia and endotracheal intubation.

Prolonged hypotension hemorrhages, and hemodynamic stresses caused by aortic clamping and unclamping during major vascular surgery are the most relevant factors endangering the coronary circulation with critical stenosis.

During cardiac surgical operations, there is sometimes insufficient time during the pre-CPB period for a complete study involving all 28 standard views given by ASE2. A revised basic examination with recommendations as to which views should be acquired at different stages of the surgical procedures (Table 1). A useful approach is to acquire and record this basic set of images in every patient, along with additional images relating to any specific pathology. If times allows, a complete examination of all views should be undertaken in the pre-CPB period. In addition, TEE may provide specific information during cannulation and before weaning from CPB.

A careful assessment of the heart for ventricular function and new wall motion abnormalities should be undertaken following all cardiac interventions TOE is of immense help in all ischemic valvular and congenital heart disease. Specific assessments should also be made relating to the surgical procedure undertaken, such as valve repairs or replacements. TEE is also useful for identifying the need for, evaluating contraindications to, and guiding placement of an intra-aortic balloon pump.


Assessment of Prosthetic Valve
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Although valve repair is now frequently performed, valve replacement remains common, particularly in adults. Symptoms may be nonspecific, making it difficult to differentiate the effects of prosthetic valve dysfunction from ventricular dysfunction, pulmonary hypertension, the pathology of the remaining native valves, or non-cardiac conditions. Although physical examination and clinical history can alert clinicians to the presence of significant prosthetic valve dysfunction, diagnostic methods are often needed to assess the function of the prosthesis. Echocardiography with Doppler is the method of choice for the noninvasive evaluation of prosthetic valve function. Even though basic principle of evaluation are same, echocardiography of prosthetic heart valves is more demanding and requires expertise, both to perform and to interpret when compared with the assessment of native valves. Different types of Prosthetic Valves (size, design, position) have different fluid dynamics. Dysfunction of mechanical valve vs. bio prosthetic valve has sometimes different etiology. Further Serial comparison with a baseline postoperative study is also essential in facilitating accurate assessment of valve function. Lecture reviews various Echocardiography and Doppler essential techniques (Transthoracic and Transesophageal) focusing General guidelines for comprehensive evaluation of Prosthetic valve function in day to day practice.
P-101 Dynamic Wound Closure by Shoelace Suturing

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Introduction: Large open wound may result from either external injury or may be created iatrogenically. The motor vehicle accident in current times results in grave injuries with associated large open wounds with complex fractures. Sometimes such injuries result in compartment syndrome which requires emergent fasciotomy procedure. This results in an iatrogenic large open wound. Such wounds increase the morbidity and require either skin grafts or various flaps. Dynamic wound closure by dermatotraction using shoelace suturing technique was used to achieve primary closure of the wound. This helped in decreasing the morbidity associated with large wounds and resulted in fairly acceptable esthetic result.

Materials and methods: In this study we have selected 4 wounds in 3 patients. One patient had medial and lateral fasciotomy wound of leg due to compartment syndrome. Another patient had fasciotomy wound over arm and third patient had a large wound over the foot following trauma. All patients received their treatment with respect to associated fracture. In addition, all wound were irrigated to clean them. Now with number 1 non-absorbable suture, shoelace pattern suturing was done. Dermatotraction was given from day 2 with gradual tightening of the sutures. Regular dressing was done. Tightening was done till skin margins approximated; at this point under local-anesthesia closure of wound was done with simple suturing, following which normal wound management was given.

Results: Of all the 4 wounds, patient with medial and lateral fasciotomy wound due to leg compartment syndrome required tightening and closure till 14 days. The arm fasciotomy wound was approximated on fifth day. The open injury resulted in closure in 20 days. All the wounds resulted in closure without requiring any extra treatment.

Conclusion: Various materials used for dynamic wound closure include the vessel loops, SS wire and stapler but from our cases we can conclude use of number 1 non-absorbable suture in shoelace pattern can result in decreasing wound related morbidity in most economical and healthy pattern without any special instruments or technique. The only limitation of this technique is that it cannot be used in wounds requiring skin flaps with or without skin grafting.
P-103 A Case of Hereditary Spherocytosis with Hemochromatosis: A Rare Association.
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Hereditary spherocytosis (also known as Minkowski-Chauffard syndrome) is an autosomal dominant familial hemolytic disorder characterized by anemia, intermittent jaundice and splenomegaly due to variety of mutations that leads defects in red blood cell membrane proteins chiefly spectrin, Ankyrin, protein 4.2 and band 3, whereas hemochromatosis is autosomal recessive condition characterized by abnormal accumulation of iron in parenchymal organs due to increased absorption of iron which overcomes the normal iron loss. Here we present a case of hereditary spherocytosis associated with hemochromatosis.

A 55 year old male patient, know case of hereditary spherocytosis, was admitted with chief complain of yellowish discoloration of sclera and urine since 7-8 days, associated with fever and vomiting. On investigation serum bilirubin and liver enzyme (SGPT/SGOT) levels were elevated and was positive for hepatitis E Ig M antibody. There was an altered echotexture of liver on ultrasonography suggestive of cirrhosis of liver associated with splenomegaly. ANA, Autoimmune liver Profile and K-F ring (Kayser–Fleischer ring) were negative. On further investigation patient was found of having serum ferritin levels of >2000 µg/L, with no past history of blood transfusion. In view of evidence of liver cirrhosis in hemochromatosis a genetic study for hereditary hemochromatosis was sent. Which showed mutation in SPTB gene (Location: Exon 16; Variant: c.3748C>C/T) along with mutation in HFE gene (Location: Exon 4; Variant: c.829G>G/A). So diagnosis of hereditary spherocytosis type-2 and Hemochromatosis was made. In view of reports of reversal of liver cirrhosis due to hemochromatosis, patient was started on iron chelating agents.

P-104 Haber land Syndrome: A Very Rare Case Report
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Haber land syndrome, also known as encephalocraniocutaneous lipomatosis (ECCL) is a rare, congenital neurocutaneous disorder. It is characterized by unilateral central nervous system, cutaneous and ocular anomalies. We report here a case of 28 years old female presented with history of intermittent episodes of generalized tonic-clonic type convulsions since 3 years, soft lipomatous swelling over right temporal area with non scarring alopecia of part of frontal and parietal region and ipsilateral scleral dermoid. CT findings were of lipomas and calcification of flax. MRI showed right sided hemi atrophy, two intracranial cysts and enlargement of right lateral ventricle. We report this case because of its rarity.
P-105 Comparative Study of Dengue Fever Cases In Outbreak of 2015-2016 at Tertiary Care Centre
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Dengue virus is flavi virus causing dengue fever & its complications. Aim of our study is to correlate clinical, USG & pathological findings of dengue fever which are useful for early diagnosis & proper management of dengue fever to reduce morbidity & mortality. We analysed all suspected cases of DF with help of clinical features, serological investigations and USG findings. Most common clinical feature of fever & hepatomegaly with most common USG findings of thick GB wall, hepatomegaly & splenomegaly, with APC most commonly in range of 60,000-1 lakh/cu mm & WBC most commonly in range of 4000-6000/cu mm. Early detection by serological testing mainly NS-1 Ag detection in all suspected cases & early supportive management can reduce morbidity, complications & mortality.

Key words-Dengue, mortality

P-106 Anesthetic Management of A Patient with Morbid Obesity Undergoing Shaft of Radius & Ulna Fracture Nailing
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Obesity is a medical condition in which there is excessive accumulation of body fat. Obesity is a preventable cause of death worldwide with increasing rates in adults and children up to 13%. Obesity is defined as BMI (Body Mass Index) of more than 30 kg/m2.

It is graded as:

- BMI >= 30-34.9 kg/m2 is obese grade-1.
- BMI >= 35-39.9 kg/m2 is obese grade-2 & is experiencing obesity related health problem.
- BMI >=40-44.9 kg/m2 is obese grade-3 & is morbid obesity.
- BMI >=45 kg/m2 is super obese.
Obesity poses a challenge to anesthetist as it is associated with many conditions like DM type-2, Heart disease, Obstructive sleep apnea (OSA), Difficult airway and difficulties in regional anesthesia due to excessive fat deposition.

We had a case of morbidly obese patient (BMI -42.9 kg/m²) posted for fracture radius /ulna nailing. Brachial plexus block by USG guided axillary approach given. Anesthetic management was uneventful.

**P-107 Japanese Encephalitis (Case Report) – A Rare Disease in Gujarat**

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Japanese encephalitis is caused by JEV-a flavivirus. It is transmitted by Culex Tritaeniorhynchus mosquito. Incidence in Asia is 1:50,000. The disease is more common in Assam, Uttar Pradesh, Karnataka West Bengal, Bihar. In 2015 there was no reported case was in Gujarat. Mortality rate is about 30% and about 30%-50% survivors are left with permanent neuropsychiatric sequel. Diagnosis is confirmed by IgM level in CSF or serum collected in acute phase of the disease. There is no specific treatment available for JE. A young male presented in ER with fever, extra pyramidal rigidity and mutism. MRI was suggestive of bilateral thalamic hemorrhagic foci. The patient was discharged after 15 days with partial improvement in speech and rigidity.

**P-108 Common Variable Immunodeficiency Syndrome in 28 Year Old Female**

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Common variable immunodeficiency (CVID) is a disease with impaired B-cell differentiation along with defect in immunoglobulin production. It is one of the most commonly diagnosed primary immunodeficiency. CVID is having prevalence of 1 in 25,000. Typically the disease occurs between puberty and 30 years of age but some evidences suggest it to appear at the ages of 5-10. CVID is associated with broad spectrum of disorders like chronic lung infections, gastrointestinal infections, autoimmunity and malignancy. Due to variable presentation, the diagnosis of CVID is usually greatly delayed, which may lead to serious complications such as bronchiectasis or pulmonary heart disease. The management of CVID involves sufficient gamma-globulin (Ig) replacement therapy and monitoring for and treatment of associated inflammatory disorders and malignancies. Here we describe a case report of a 28-year-old woman, suffering from recurrent respiratory infections with bronchiectasis changes in lung, seen by several specialists over a period of 19 years, now diagnosed as CVID.
P-109 Rare Classical Presentation of Kartagener Syndrome
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Introduction: Primary ciliary dyskinesia is a rare genetic disorder that causes defects in the motility of cilia lining the respiratory tract, fallopian tube and flagella of sperm cell. A combination of situs inversus, chronic sinusitis and bronchiectasis known as kartagener syndrome.

Case Report: A 24yr old male presented with breathlessness on exertion, productive cough with yellowish expectoration since 15 days, fever without chills since 1 month, infertility since 5 years, chronic cold. No h/o blood in sputum, chest pain. On examination temperature, pulse and blood pressure was normal with respiratory rate 26/ min, spo2 94 % by pulse oximeter. Apex beat was localised to right fifth intercostal space on midclavicular line; percussion suggestive liver dullness of left side—all this suggestive of situs inversus. On auscultating respiratory system, there were bilateral lower zone consolidation. On investigation total count 15000/ cmm, ESR 85, renal and liver function tests were within normal range. Chest x-ray suggestive of bilateral lower zone consolidation, bronchiectatic changes in both lungs and dextrocardia. X-ray paranasal sinuses suggestive of chronic sinusitis. Semen analysis suggestive of Azoospermia. HRCT of chest showed bronchiectatic changes in both lungs and small areas of consolidation. USG ABDOMEN suggestive of situs inversus.

Although it is a very rare disease, kartagener’s syndrome was diagnosed clinically, and confirmed by other investigations HRCT, semen analysis and USG abdomen and treated with intravenous antibiotics and mucolytic agents with chest physiotherapy. The majority of symptoms rapidly improved and he was discharged on low dose antibiotics.

P-110 A Case of Paroxysmal Cold Hemoglobinuria (PCH)
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Paroxysmal cold hemoglobinuria (PCH) is a rare form of autoimmune hemolytic anemia (AIHA). PCH is mainly characterized by the involvement of Donath-Landsteiner antibody. It is commonly seen in children, as many as 40% of immune hemolytic anemia have been reported due to the Donath-Landsteiner (D-L) antibody. It is mostly triggered by viral infection & self-limited in nature. As PCH is common in children and presentation of PCH is similar with that of complicated malaria or dengue fever, it is difficult to suspect them in adults as the first clinical impression. We report a case of an adult married female patient presented with PCH with full recovery.
P-111  A Case Series of Hypokalemic Paralysis Due to Variable Etiologies
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Serum potassium has prominent effect on skeletal, cardiac and intestinal muscle cell. Low serum potassium (hypokalemia: K+ <3.5mEq/L) occurs in up to 20% of hospitalized patients. There are numeral causes of hypokalemia. Hypokalemia can be caused by redistribution of K+ between tissues and the ECF or by renal and nonrenal loss of K+. Furthermore hypokalemia has prominent adverse effect on skeletal, cardiac and intestinal muscle cell. Hypokalermia leads to weakness of skeletal muscle. Paralysis due to hypokalemia is relatively rare condition. It is characterized by flaccid reversible paralysis with absent deep tendon reflex and normal sensations. We report series of four different cases which presented with skeletal muscle weakness due to hypokalemia but having different etiologies.

Case 1: K/C/O hypothyroidism and Distal Renal Tubular Acidosis presented with hypokalemic quadraparesis
Case 2: Primary hyperaldosteronism presented with hypokalemic paralysis
Case 3: Type1 distal renal tubular acidosis secondary to sjogren’s syndrome presented with hypokalemic paralysis
Case 4: Hypoparathyroidism due to mutation of CaSR presented with hypokalemic paralysis with seizures.

P-112 Anesthetic Management in a Patient with Colloid Goitre Undergoing Total Thyroidectomy
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We present a case of a 50-year-old man with a huge colloid thyroid swelling, gradually increasing in size for last 10 years. He had a history of deferred surgery in private hospital, despite 5-6 attempts using different laryngoscopes, bougie, and stylet. Patient was successfully intubated with help of fiberoptic intubation using loco-sedative technique. Patient was electively kept intubated postoperatively in ICU in view of chances of tracheomalacia due to prolonged large goitre. He was extubated successfully on post-
op day 2 after demonstration of leak around trachea following tracheal tube cuff deflation. Such patients are a challenge for the anaesthesiologists due to various perioperative complications, complexity of the surgical intervention and risk of uncontrolled haemorrhage from the vascular injury. The importance of thorough preoperative evaluation, attention to difficult intubation and maintenance of airway should be emphasized. Also the management of peri and postoperative complications is of due consideration.

P-113 Anesthetic Management of Atypical Eclampsia with Intra-Ventricular Hemorrhage-Case Report
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Cerebrovascular Accident During Hypertensive Disorder Of Pregnancy Is a Rare Entity, But carries high risk of mortality and morbidity due to its unpredictable onset and late diagnosis. Here, we report an unusual case of 20 years old primigravida with 36 weeks gestation having no risk factor, which developed sudden atypical eclampsia and intra-cranial haemorrhage within few hours. She was successfully managed by multidisciplinary approach including emergency cesarian section and conservative neurological treatment for intra-ventricular haemorrhage.

P-114 A Case Report of a 25 Year Old Male Patient Having Right Sided Preauricular Region Swelling Suggesting of Pilomatricoma
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Pilomatricoma is typically an isolated benign tumour of the hair follicle matrix with very low incidence, recurrence and initial diagnostic accuracy. They most frequently appear as solitary, firm nodules, exhibiting a normal to pearl white epidermis. Calcium deposits are present in well over half the lesions identified. Pilomatricomas are frequently associated with the mutations of beta-catenin in hair follicle development. Because the recurrence rate after excision is low, pilomatricoma should be
considered in the case of local recurrence. Histologically, pilomatrixomas present as a well demarcated lesion, stemming from dermis and extending into the subcutaneous fat. They classically consist of islands of epithelial cells comprised of both basophilic cells with meagre cytoplasm and ghost cells that have a central unstained area indicative of a lost nucleus. A case of a young male who presented with right sided cheek swelling since 2 years. CT SCAN revealed a small well defined lesion with dense internal calcification in subcutaneous plane just below skin surface and superficial to right masseter muscle at the level of mandible on right side. Lesion was excised under local anaesthesia. Histopathological examination reported a final diagnosis of PILOMATRICOMA.

P-115 A Case Report of 17 Year Old Male Patient Having Right Side Submandibular Region Swelling Undergoing Excision under General Anesthesia

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P-116 A Case Report of Male Breast Cancer in a Very Young Patient
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Introduction:
Male breast cancer accounts for 1% of all breast cancer cases, and men tend to be diagnosed at an older age than women (mean age is about 67 years). Several risk factors have been identified, such as genetic and hormonal abnormalities.

Methodology
We present a case of 25 year old female patient who presented with right breast lump since 8 months. He was diagnosed to have advanced invasive ductal carcinoma without any important risk factors. Patient underwent neoadjuvant chemotherapy and rt modified radical mastectomy and lt retro areolar lumpectomy. Patient received post operative radiotherapy and tamoxifen. patient developed liver and lung metastasis and died due to multiple organ failure within 2 years.

Result:
patient developed liver and lung metastasis and died due to multiple organ failure within 2 years.

Discussion
Invasive ductal carcinoma in men presents peculiar features. About 42% of breast cancer cases in men are diagnosed in stage III or IV. Men with breast carcinoma have a poor prognosis, especially in the younger age group, because most breast enlargements in young men are dismissed as gynecomastia.
P-117 A Case of Idiopathic Thrombocytopenic Purpura, Hepatitis B, Ulcerative Colitis and Syphilis in HIV AIDS

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A 30 year old hindu male, working as a priest in a temple, presented to our hospital with the chief complains of multiple ecchymotic patches all over the body. The patient is already a diagnosed case of HIV AIDS with CD4 count of 157 on ART (TLE) since 2 years. Patient was diagnosed to have hepatitis B serology positive before 2 years as well and is in the chronic hepatitis phase, not taking any antivirals at present. He also has treponema antibody positive for which he has taken adequate antibiotics. Patient had a history of bleeding per rectal before 1.5 years, for which he underwent lower GI scopy and was diagnosed with ulcerative colitis on mucosal biopsy and is on Mesacol since then. Patient underwent routine investigations this time for his ecchymotic patches. Persistent thrombocytopenia (APC range 12,000-16,000) was found with negative malaria, dengue, chikungya and other viral fever serologies. No hepato-splenomegaly was seen on clinical examination or ultrasonongraphy. Bone marrow aspiration and biopsy showed isolated megakaryocytic with no evidence of any abnormalities in other cell lineages. A Hematologist referral was done wherein the treatment options of high dose IV steroids and IVIV were considered. Due to financial constraints, the patient refused the IVIG treatment. With PRC supplementation and under close observation, IV MPS was given for five days, after which patients’ platelet count significantly improved with no complications. Patient is now on low dose steroid on a taper regime. This case highlights that Idiopathic thrombocytopenic purpura in a patient with HIV AIDS can be managed, if not cured.

P-118 Moyamoya Disease

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Moyamoya disease is characterized by idiopathic progressive arterial stenosis or occlusion of bilateral internal carotid artery and development of collateral vessel which looks like “puff of smoke”. Most commonly occur in japan and korea with incidence rate of 0.35 to 0.54 per 100000 . In India very rare. Main treatment is revascularization of vessel. Here 38 year old female patient presented with left hemiparesis and on the next day patient had seizure and developed quadruparesis and became unconscious. MRI brain show bilateral temporoparietal infarct and CT angiography of cerebral vessel suggestive of narrowing of left and right middle cerebral artery from its origin and development of collateral on hemisphere. Patient had movement on left side on 3rd day and patient became conscious but disoriented and cognitive impairment. Refer to higher center for further management.
SSPE (Subacute Sclerosing PanEncephalitis) is a rare, debilitating & chronic form of progressive brain inflammation caused by persistent infection with mutant measles virus also known as measles encephalitis or Dawson disease.

A 17 year male referred to civil hospital Ahmedabad with diagnosis of Wilson's disease. Patient had complain of progressive dementia, emotional liability for 1 year & difficulty in walking and hallucinations for approximately 1.5 months. Patient was having kayer-Fleischer ring. However In our indoor stay occasional myoclonic jerks were observed. On neurological examination spasticity was present. Investigations showed normal Hemogram, S.Electrolytes, S.RBS, S. Vitamin B12, Thyroid Profile, S.ceruloplasmin, S.Cu and S.Iron levels. EEG showed periodic high amplitude bursts. MRI Brain showed altered signal intensity in putamen, fronto-parieto subcortical white matter, right external capsule, cortex & sub cortical white matter in right parietal lobe. Repeat ophthalmological eavaluation showed presence of limbal ring which was misdiagnosed as kayer-fleisher ring. On MR spectroscopy supported diagnosis of SSPE. CSF routine micro was normal; his CSF-anti measles antibody level was above normal limits (37.61 AU/ml).

On basis of age, history, clinical examination & investigations the diagnosis of SSPE was made & patient was started orally on Isoprinosine, antiepileptic & physiotherapy. Patient's relatives explained about care & prognosis of the disease.
P-120 To Study The Effectiveness of Local Evidence Based Severity Scoring Guided Protocol in Management of Acute Organophosphate Poisoning

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**Introduction:** Identifying need for a proper protocol for identifying patients at greater risk of mortality and management of patients with acute OP poisoning, we conducted a retrospective cohort study which reported that spO2 < 85%, time elapsed since exposure > 2 hours, s. acetylcholinesterase < 1000 and GCS < 12 at the time of admission were related with increased need of mechanical ventilation, longer hospital stay and poorer prognosis. Based on this evidence we made an easy to use severity scoring system for guiding local protocol for management of OP poisoning. We planned this study to apply the severity scoring system on a different set of patients to validate the scoring system and assess its usefulness in local protocol to reduce morbidity and hospital stay and improving prognosis in cases of acute OP poisoning.

**Methodology:** The study was conducted in the Deptt. of Medicine, SBKS MI & RC, Sumandeep Vidyapeeth, Piparia after procuring approval from the institutional ethics committee. It was an observational study. From the previous study we developed a severity scoring system based on four parameters at admission namely spO2 at room air, time elapsed since exposure, s. acetylcholinesterase level and GCS. The score may vary from 4-8 with poor prognosis in those with severity score < 6. 30 cases of OP Poisoning coming to the Dhiraj General Hospital were enrolled in the study and subjected to measurement of vitals, spO2 at room air, GCS and s. acetylcholinesterase apart from the routine clinical examination and investigations. The data thus collected was analysed to find odds ratio of extended hospital stay and mortality in patients with severity score < 6 or ≥ 6.

**Results:** As the sample size was 30, we calculated log odds. We observed that log odds of need for mechanical ventilation, duration of stay in hospital for > 7 days and mortality in patients with score < 6 was 4.89, 4.23 and 3.29 respectively.

**Conclusion:** The severity scoring system held true. It is easy to use; three of four parameters used can be easily assessed bedside and only one investigation is needed. It is being used in making a local protocol for the management of OP poisoning.
Devic's disease is believed to be a different entity having ADEM disease with ophthalmic involvement. ADEM disease is a post-infectious neurodegenerative disease. Most commonly caused by a viral etiological infection. Devic's disease with MCTD is also known as the Asian variety of Devic's disease. Differentiating features in MS and Devic's disease include the CSF picture having a higher number of cells, which is more in Devic's disease and which is neutrophilic. Another feature is the presence of aquaporin 4 antibody. ADEM is mostly curable with intravenous steroids. Methylprednisolone is useful in most patients.

Pt is a 40-year-old female patient presenting with altered sensorium since 4 days, progressive with concomitant difficulties in vision. Pt is diagnosed as ADEM in MRI imaging, further consolidated with CSF picture showing raised protein with increased neutrophil. NMO antibody is negative, which is quite common as it is negative in 40% of patients. Pt is positive for antinuclear profile markers for MCTD. Pt is improved with therapy, with improvement seen in MRI imaging as well, which is less acute in MS.

Joubert syndrome is a rare autosomal recessive condition characterized by neonatal breathing abnormality, intellectual disability, ataxia, hypotonia, psychomotor delay, specific mid-hindbrain malformation. We report a case of an 18-year-old male patient presenting with a first-time seizure and intellectual delay. MRI suggestive of hypoplasia of the inferior vermis with thickened superior cerebellar peduncle. This favors congenital vermian hypoplasia. Incidence of Joubert syndrome is 1:80,000 to 1:100,000 live births. Treatment of this patient is symptomatic and supportive. Early diagnosis of this disease helps us to rehabilitation programmes.
An Acoustic Schwanomma is a benign primary intracranial tumor of the myelin forming cells of Vestibulocochlear Nerve. It arises from Schwann cells which are responsible for myelin sheath that keep peripheral nerves insulated. An Acoustic Schwanomma is a benign primary intracranial tumor and diagnosed with MRI. It usually occurs in adult patients with age > 50 years. No difference has been observed in gender. Incidence Rate is relatively rare 1.1/1, 00,000. Ophthalmic symptoms are less common, occurring in about 16% cases only. Although Acoustic Schwanomma presents with symptoms involving 8th cranial nerve, this patient presented with gradual visual loss. 32 year old male patient presented with chief complaint of visual loss in right eye since 7 days which was gradual, progressive. There was no h/o hearing loss or tinnitus. MRI Brain with Whole Spine s/o intensely enhancing right cerebro-pontine angle tumor with internal cystic area and involvement of 8th cranial nerve with secondary mass effect and obstructive hydrocephalus suggestive of Acoustic Schwanomma. Linear hyperintense signal intensity lesion noted involving cervical spinal cord at C6-C7 level suggestive of Syringohydromyelia. Patient was advised VP Shunt with CP Angle Tumor Excision after which the patient gradually improved from perception of light to be able to see properly with glasses. Thus, whenever a young patient presents with isolated visual loss, suspicion of hydrocephalus with some associated intracranial pathology must be ruled out. Isolated vision loss is a very rare presentation of hydrocephalus.
A 25-year-old male with LUDWIG ANGINA (rapidly progressing necrotizing cellulitis affecting the posterior oropharynx, sub maxillary and sublingual spaces causing airway obstruction. Death in such cases occurs due to airway compromise.) with swelling in cheek since 4 days, toothache-5days & fever. Patient was having restricted mouth opening, diffuse neck swelling & painful neck extension. Awake fiber optic intubation was planned, with tracheostomy as a backup. With use of nasopharyngeal airway, patient was induced under TIVA.

The anesthetic challenge in our patient was that he had already progressed to a stage where he had symptoms of airway obstruction and was becoming exhausted even with slight movements. Airway management expertise is essential in every medical specialty and maintaining a patent airway is essential for adequate oxygenation and ventilation and failure to do so, even for a brief period, can be life-threatening

Conclusion: With prompt pre and intra operative management we can secure such difficult obstructive airway condition and enhance good recovery to patient.

Key-Words: Ludwig’s Angina, Ketamine, Naso-Pharyngeal Airway.
P-126 Nightmare Under Sedation : Case Report  
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A 25-year-old male patient of 60kg came to Dhiraj hospital with swelling in cheek and upper neck since 4 days, toothache since 5 days following which he developed fever, pain & difficulty in swallowing. On physical examination, he had no respiratory distress but was uncomfortable because of pain and intra oral drainage of pus. He was febrile (101 F) with heart rate of 122 per minute and blood pressure 132/90 mm Hg. On airway examination mouth-opening was restricted (<1 finger). Mallampati grading (MPG) could not be assessed due to restricted mouth opening. There was a diffuse tender neck swelling, in the sub-mental & sub-mandibular space. Neck extension was restricted. Diagnosis of Ludwig’s angina was made and he was scheduled for emergency drainage of the abscess.

After written informed consent, anesthesia plan was to do the procedure under sedation. Emergency tracheostomy was kept ready. Patient was given head-low position; premedicated with iv glycopyrrolate, inj emset and inj Tramadol. Nasal decongestion was accomplished using oxymetazoline 0.05% nasal drops, one drop in each nostril, and lignocaine 4% topical. A well lubricated nasopharyngeal airway of 6.5mm was introduced nasally with minimal discomfort to the patient. 100% oxygen was admistered through it. Sedation was given to patient with Inj.midazolam and inj Ketamine intravenously via 18G vein flow in left upperlimb. Intra-operatively, the vitals were stable.

The following morning the patient was comfortable and neck swelling had subsided.  
**Discussion:** Airway management of patients with Ludwig’s angina presenting for surgical drainage is a nightmare for the anaesthesiologist. The anaesthetic challenge in our patient was that he had already progressed to a stage where he had symptoms of airway obstruction and was becoming exhausted even with slight movements. Airway management expertise is essential in every medical speciality and maintaining a patent airway is essential for adequate oxygenation and ventilation and failure to do so, even for a brief period, can be life-threatening. Alternative airway technique as Tracheostomy always needs to be kept ready.  
**Conclusion:**With prompt pre-and intra operative management we can secure such difficult obstructive airway condition and enhance good recovery to patient.  
**Key-Words:** Ludwig’s Angina, Sedation, Naso-pharyngeal airway.
P-127 Airway Management in a Patient with Crouzon Syndrome Posted for Mastoidectomy with High Arched Palate – An Anticipated Difficult Mask Ventilation and Airway

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Background-Crouzon syndrome is a rare autosomal dominant hereditary disorder, characterized by craniosynostosis. Management of difficult airway is challenging because of craniofacial abnormalities, proptosis, kyphoscoliosos with restrictive lung functions, high arched hard palate, hypoplastic maxilla and relative mandible prognathism, absence of buccal pad of fat.

Case summary-We present a case report of 15 years old female patient of right mastoiditis with crouzon syndrome with mouth opening of 3 finger Malampati Grade 3 with high arched palate with expected difficult mask ventilation posted for exploratory mastoidectomy. On the basis of our experience, external facial padding was done to create proper seal with anatomical face, oral intubation was done with McCoy blade no.3. There was hemodynamic stability and no incidence of airway trauma in our patient. Intraoperative and postoperative patient was stable.

Conclusion-Anesthetic management is very challenging in Crouzon syndrome. Anticipation, patient counseling, complete difficult airway cart with alternative plans, and multidisciplinary approach goes a long way in managing such patients.

Key-Words: Difficult airway, difficult mask ventilation, crouzon syndrome,

P-128 Airway Management with Awake Fibreoptic Intubation in a Patient of Having Oral Sub mucosal Fibrosis Posted for Intralesional Sub mucosal Fibrectomy having One Finger Mouth Opening (10MM) – An Anticipated Difficult Airway

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Background- Oral submucous fibrosis (OSMF) is a premalignant lesion of the buccal mucosa caused by chewing betel quid. It results in progressive inability to open the mouth. Patients with Oral submucous fibrosis require general anesthesia for trismus correction, resection, and reconstructive (oncoplastic) surgery for coexisting oral malignancies or other unrelated surgeries. Oral submucous fibrosis causes difficulty in laryngoscopy and intubation of endotracheal tube. Fibreoptic intubation is the gold standard for this.

Case summary- We present a case report of 24 years old male patient having oral submucosal fibrosis with mouth opening of 1 finger (10mm) Mallampati Grade 4 with difficult oral intubation (interincisor distance 10 mm). On the basis of our experience, nasal intubation was done with the help of Fiberoptic bronchoscope under topical anaesthesia. There was hemodynamic stability and no incidence of airway trauma during fibreoptic bronchoscopy in our patient. Patient was stable during perioperative period.

Conclusion- Awake nasal fibreoptic intubation under topical anaesthesia was done successfully in our patient in which interincisor distance was less and conventional laryngoscopy was not possible due to trismus.

Key-Words: Difficult airway, Trismus, Fiberoptic Bronchoscope
P-129 Anesthetic Management of a Patient of Massive Colloid Goitre with Partial Tracheomalacia

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A 35 yrs old female patient of 60 kg weight presented to Dhiraj hospital with chief complaints of large midline neck swelling of 10 x 10 cms not associated with fever, pain, dysphgia, weight loss, stridor or hoarsness of voice. Airway assessment was normal except for restricted flexion of neck due to the neck swelling. Vital parameters were normal with heart rate of 68/minute, blood pressue 112/70 mm of hg. Diagnosis of Colloid Goitre was made with associated partial tracheomalacia. Patient was posted for subtotal thyroidectomy.

After obtaining written and informed consent, an 18G iv line was secured and patient was shifted to operation theatre. Patient premedicated with injection Glycopyrollate 0.2mg, inj emset 4mg, inj pantoprazole 40mg, inj midazolam 1mg and inj dexametomidine 40mcg. Patient was induced with inj propofol 150mg and inj scholine 75 mg. Preoxygenated with 100% oxygen for 5 minutes and intubated with cuffed armoured et tube of 7.5 number. Patient was maintained with oxygen, nitrous, isoflurane and inj vecuronium 4mg stat and then 1mg every 20 minutes. Dexmedetomidine infusion was started at 0.4mcg/kg/hr.

Discussion: Huge neck swelling is a challenge to the anesthetists as it causes difficulty in bag and mask ventilation as well as laryngoscopy as it compresses the upper respiratory tract thereby predisposing to intraoperative hypoxemia. Associated tracheomalacia may cause expiratory flow obstruction and interfere with clearance of secretions.

Conclusion: Such a case is a challenge to anesthetists as proper extubation with spontaneous respiratory effort of the patient is the main aim which can be achieved by gentle lifting of thyroid.
**P-130 Silicotuberculosis**

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Once a disease of Industrialisation but now, a rarity. We encountered a patient of this occupational lung disease aged 58 years. He had a history of working in a stone quarry for five years before 25 years. He then worked in a cotton mill factory for the next ten years. His predominant symptoms were breathless which initially began after exertion and went on to be severe enough to be present at rest, and cough. His symptoms began 20 years ago and he was diagnosed to have the most common secondary infection seen in such patients ie Tuberculosis. Careful history taking, radiology (conventional chest radiography and computed tomography) and microbiology (identification of mycobacterium tuberculosis in sputum and pleural exudate) stamped the diagnosis. He took four courses of antimycobacterial therapy from 1996 to 2002. He was also treated with supportive treatment in the form of bronchodilators, immunomodulators and supplemental oxygen therapy. The patient recently presented to us on 8/12/2016 with breathlessness at rest, low oxygen saturation, cough and right lung pneumothorax. He was ventilated after Intercostal drain insertion and given intensive care including 24 hour monitoring of cardiorespiratory status, fluid and electrolyte management, antibiotics and bronchodilators. Unfortunately he succumbed to this long term ailment on 17/12/2016.

**P-131 Breast Tuberculosis: A Rare Presentation Of Extra-Pulmonary Tuberculosis**

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Tuberculosis of breast is extremely rare. It is uncommon even in those countries where the incidence of pulmonary and extra-pulmonary TB is high. Tuberculosis involves breast infrequently as compared with other organs of the body. This is due to the fact that, mammary glands provide infertile environment for survival and multiplication of Mycobacterium tuberculosis. Clinical presentation is usually of a solitary, ill-defined, unilateral hard lump situated in the upper outer quadrant of the breast. This disease can present a diagnostic problem on radiological and microbiological investigations, and thus a high index of suspicion is needed. Tuberculosis has been named, the great masquerader in recognition of its multifaceted presentation, and thus, the clinician may confuse tuberculous mastitis with either carcinoma or breast abscess.

Hereby, I am presenting three cases of Breast TB diagnosed at our tertiary care hospital proven by FNAC in all three and demonstration of AFB by ZN stain in two of them including a case of combined Tuberculous infection of breast alongwith Carcinoma of breast. Successful outcome was seen by the treatment with Anti-Tuberculosis Therapy.
**P-133 Chickenguniya Encephalitis (Case Report)- A Rare Disease in Gujarat**

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Chickenguniya encephalitis is a rare form of viral encephalitis caused by chickenguniya virus of togaviridae family which is transmitted by aedes mosquito. Incidence rate of chickenguniya encephalitis is 37 per 100000. Mortality rate is 16.6 to 30% and upto 44% in old age patients. This is a case of 82 years old male who presented with H/O fever with arthralgia since 3 days. On examination patient was stuporous, showed few jerky movements and swelling with redness of joints. Cns examination showed no other focal neurological deficit. Serology workup was negative for dengue and positive for chickenguniya. Mri brain showed multiple hyperintense foci in b/l fronto parietal white matter lesions suggestive of viral encephalitis. CsF dna pcr for HSV 1 and HSV 2 was negative. Patient was started on intravenous steroid and antivirals. Patient showed improvement from day 2 and clinical recovery on day 7. This study was to show that early and prompt treatment of chickenguniya encephalitis has favourable prognosis.

**P-135 A Case Where Electric Shock Gives Cardiac Shock**

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With more technological equipments, electric injuries have increased dramatically in the last few decades. Electric shock causes various levels of damage, but Cardiac Arrest is the most fatal form where long CPR (Cardiopulmonary Resuscitation) is warranted.

A 31 years old male patient, normotensive, nondiabetic was brought to Emergency Room in unconscious state secondary to electric shock while wielding tools. On examination, there was no carotid pulse, so CPR was started immediately. According to history, patient had electric shock before 60 minutes, and then he was brought in ER. Patient was looking like in “rigor mortis” state due to electric shock, however CPR was continued in ER considering young age and electric shock induced cardiac arrest. On connecting monitor, ECG was showing Ventricular Fibrillation. Hence, defibrillation shock was given immediately. Amioderone was also given intravenously. About 30 minutes later, ROSC- Return of spontaneous circulation was achieved, and patient was shifted to ICU for further management. Patient was kept on therapeutic hypothermia(32-34 °C) for 48 hours in ICU with ventilator support. Next, patient was extubated after 3 days and discharged in healthy condition after 5 days.

To conclude, this case illustrates importance of “Long CPR” in cardiac arrest induced by electric shock. Furthermore, duration of unresponsiveness of a patient must not prevent a physician to deter CPR. On the contrary, cardiac arrest due to electric shock should be treated with extended CPR efforts. Having this approach, a physician can definitely save a life. Especially, in a nation like India where electric shock is a very common scenario.
P-201 Role of Fiberoptic Bronchoscopy in The Evaluation of Lung Cancer
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Introduction:
Lung cancer has emerged as one of the most common form of malignant disease worldwide. Fiberoptic bronchoscopy is an important entity in the armamentarium of procedures listed in diagnosis of lung cancer.

Aims & Objectives:
1. To study clinical and radiological presentation of lung cancer
2. To study various types of lung cancer
3. To study and compare yield of fiberoptic bronchoscopy in diagnosing patients of lung cancer.

Materials & Methods:
The present study was carried out at the Dept. Of Pulmonary Medicine, B J Medical college, Ahmedabad during the period of June 2014 to January 2015. Fiberoptic bronchoscopy was performed upon 25 patients having high clinical suspicion of lung cancer by history, physical examination, systemic examination, by chest x-ray and CECT thorax.

Results:
Out of 25 cases 22 cases (88%) were positive for malignancy and 3 cases(12%) were found to be negative. Commonest histological pattern was adenocarcinoma (32%) followed by squamous cell carcinoma(28%), small cell carcinoma(20%) and neuroendocrine tumor(4%).

Conclusions:
The fiberoptic bronchoscopy associated to advanced tissue sampling techniques represents the gold standard for the diagnosis of lung cancer.
**P-202 Comparison of Various Modalities of Treatment for Fracture Shaft Femur in Children**

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**Materials And Methods**- Prospective study of sixty patients with open phases (Age range from 4 to 13 years) underwent treatment for fracture shaft femur. In 32 patients closed Ender's nailing was done, 5 patients underwent plate osteosynthesis and 23 were treated conservatively. 9 patients had additional injuries. Average follow up was for 1.8 years.

**Results**- All patient had complete fracture union without growth disturbance. In patient with IM Ender’s nailing average time for independent ambulation was four days & hospitalization was for 4-5 days. There was no Non-union, Mal-union or Infection. On average follow up of 25 weeks, no patient had deformity of more than 10 degrees in any plane, clinical loss of motion or limb length discrepancy. In case of Spica cast average hospitalization was for 4 weeks and independent ambulation was at 8 to 10 weeks. Mean deformity ranged from 20-30 degrees in all cases.  Patient treated with plate osteosynthesis shows anatomical union without deformity.  Full weight bearing started at 10th week and full range of motion achieved at 2nd week.

**Conclusion**- As compared to Plating and Conservative treatment, Ender's nailing is minimally invasive, mobilizes patient early and there is early union (as it is close method) without limb length discrepancy.

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**P-203 Study of Functional Outcome of Ipsilateral Femur and Tibia Fracture (Floating Knee) in Adults**

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**Background**: This study evaluated the outcomes of surgical management of ipsilateral femoral and tibia fractures(floating knee) in adults and functional outcome

**Methods**: 6 patients (5 men, 1 woman; mean age 35; range 18 to 65 years) were enrolled in this study. The fracture types were classified according to the classification by Fraser et al.as follows; Type 1(3), type 2a(1),2b(1),2c(1). Femur fractures were treated using locked intramedullary nails, plat-screws or both, and tibia fractures were treated using ext. fixator (initially in open fracture ), or plate-screws, and locked intramedullary nailing. The mean follow up duration was 2 years (rang 8 months to 2.5 years)

**Results**: The extent of bony union according to the karlstrom criteria was as follows; Excellent 4, good 1, acceptable 1.

**Conclusion**: The associated injuries and type of fracture (open, intra articular, commination) are prognostic factors in a floating knee. The best management of associated injuries for good final outcome involves intramedullary nailing in both and post op rehabilitation.
P-204 Acute Myocardial Infarction In Young Nephrotic Syndrome: A Rare Association

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A 28 years old male patient presented to emergency department with severe retrosternal chest pain radiating to left arm and sweating. At the age of 16 years patient had developed puffiness of face and undergone investigations. As per reports proteinuria 1.5 g/day. Renal biopsy was suggestive of mesangioproliferative glomerulonephritis. Patient was treated with steroid and antihypertensive. He was off treatment since one year. No similar family history. On examination, he was pale, pulse 72/min, BP 230/110 mm hg, puffy face and pedal edema. Fundus shows hypertensive retinopathy. ECG show acute anterior wall myocardial infarction. Echo suggests apical and septal hypokinesia, left ventricular hypertrophy, LVEF of 45%. Thrombolysis done after control of blood pressure. CAG reveal 100% occlusion of left anterior descending artery and PCI done along with routine anticoagulant, antiplatelet, antihypertensive and statin given and patient stabilized.

In nephritic syndrome, apart from hyperlipidemia, compensatory increase in coagulation factors tribute to thrombosis of coronary vessels. As myocardial infarction in young male of nephritic syndrome is likely to be caused by non-atherogenic etiology, prompt management and vigilance with intracoronary and invasive pharmacotherapy play crucial role for favorable outcome.

P-205 Subluxation of Torn Part of Peroneal Brevis with Peroneal Longus Tear- A Case Report

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Introduction:- Peroneal tendon subluxation out of peroneal groove is a well described condition but not properly diagnosed in acute setting. Most of lateral ankle injuries are treated as ligamentous sprain which result in delayed diagnosis with increase morbidity. Mostly the peroneus brevis subluxation from the groove is associated with its tear. We had a case in which patient had acute peroneal brevis tear with subluxation of torn portion out of peroneal groove associated with tear of peroneal longus.

Materials and methods:- A case report of 60 year male patient with h/o twisting injury in right ankle had symptoms of pain, swelling and clicking along the lateral aspect of ankle. During dorsiflexion and eversion resulted in some crepitation along the posterior margin of fibula. The diagnosis of tendon subluxation was confirmed by USG which showed subluxating tendon along with tear of peroneal brevis and longus with stretched out superior peroneal retinaculum. During surgery it was found that the torn portion of peroneal brevis was subluxating with associated tear of peroneal longus. The surgery involved
peroneal brevis tear repair with tabularization, removal of torn portion of peroneal longus with fibula groove deepening and superior peroneal retinaculum repair. Below knee slab was given for 4 weeks followed by BK cast given for one month then mobilization started.

**Result:** In immediate post op period patient had complete removal of pain and also during active dorsiflexion and eversion patient had not clicking sound. Patient started full weight bearing walking on his cast which was against medical advice, despite this the end result at 3 months was fairly satisfactory with complete relief of symptoms and full range of movement.

**Conclusion:** The routine peroneal tendon subluxation involves subluxation of whole peroneal brevis tendon. We had a subluxating torn portion of peroneal brevis tendon with tear of peroneal longus. The treatment of tear suturing, fibula groove deepening and superior peroneal retinaculum repair is a standard treatment for this injury with good outcome.

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**P-206 An Interesting Case of Lung Hydatid Cyst**

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**Background:** Echinococcosis, also called hydatid disease, hydatidosis, or echinococcal disease, is a parasitic disease of tapeworms of the Echinococcus type. People get two main types of disease, cystic echinococcosis and alveolar echinococcosis Lung is second most common organ to be infected with hydatid cyst.

**Case History:** A 25 year male patient, driver by occupation, residing at kheda district, presents to O.P.D. with chief complaints of dry cough for last 15 days. Mild fever for last 15 days, one episode of breathlessness, redness and puffiness over face 12 days back. Pt. has no history of AKT and has been a tobacco chewer for 8 years. non-smoker, non-alcoholic. No significant past and family history. CXR S/O RT PLEURAL EFFUSION with single large air-fluid cavity, usg thorax s/o Apprpx 90*75 mm sized cystic lesion with internal septation and undulating membrane within is noted in right pleural cavity s/o hydatid cyst cect thorax -s/o Cystic lesion with internal air fluid level and enhancing serpiginous floating membrane within (water lily sign) possibility of hydatid cyst with detachment of endo-cystic membranes. Moderate right pleural effusion pt was started upon T. Albandazole 400mg od for 21 days and reffered to CVTS department for surgical intervention.

**Result:** Patient improved symptomatically with chemotherapy.

**Conclusion:** This is interesting case of pleural effusion with single air-fluid filled cavity which can be misdiagnosed as tuberculosis or empyema.
P-207 Arterio Venous Malformation in a Young Patient

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Background:
PAVM are rare abnormalities of pulmonary vascular system characterized by an abnormal communication between the pulmonary artery and vein, resulting in a low resistant right to left shunt. Most PAVM are congenital in nature and 70% are associated with Hereditary Hemorrhagic Telangiectasis.

Case History:
A 22 years old unmarried male, supervisor in iron factory for 3 years with no habits came to the O.P.D. with complaints of low grade fever, cough with white expectoration and right sided chest pain. O/E patient was tall (ht-190 cm) with grade IV clubbing with peripheral cyanosis maintaining spo2 of 79% on room air without any respiratory distress with no epistaxis or any other medical illness. Chest x-ray revealed right lower zone opacity. Sputum for AFB was negative. Arterial Blood gas analysis showed hypoxemia with pao2-38mmhg, sao2 of 71%. All Blood investigations were normal except for polycythemia (HB-22.7 Hct-50%) with elevated total bilirubin of 5.84mg/dl. 2D echo was found to be normal. PFT showed severe restriction. USG Abdomen was normal hence CTPA was done which showed Pulmonary arteriovenous malformation involving branch of right pulmonary artery with superior branch of right pulmonary vein. Patient was reffered to CTVS department for surgical management.

Result:
The approximate incidence of PAVM is 2-3 per 100,000. PAVM usually presents in the third or fourth decade and only 20% present at age less than 21 years. Though the triad of dyspnoea, clubbing and cyanosis is considered specific for PAVM it is observed only in 10% cases. However the cause for raised bilirubin remains unclear in this patient.

Conclusion:
This is an interesting case of Pulmonary arteriovenous malformation with patient being asymptomatic inspite of peripheral cyanosis and hypoxemia. Patients with PAVM can be successfully treated with resolution of essentially all symptoms. Embolotherapy is the treatment of choice for most patients.
Coronary artery disease is the leading cause of death among elderly patients. The role of ECG in diagnosis and prognostication of AMI is well established. It was found that precordial and epicardial mapping and magnitude of ST segment elevation is a reflection of the extent of myocardial injury. ECG distortion of the terminal portion of the QRS complex on admission was associated with larger infarct size and increased mortality. Presence of fragmented QRS (FQRS) complexes demonstrated that FQRS complexes more common among patients with prior myocardial infarction. Fragmentation of QRS was investigated as a possible new tool to identify the high risk cardiac population. RSR’ complex associated with wide QRS complex could be associated with impaired depolarization within tissue surrounding the myocardial scar. FQRS was found to be a predictor of all-cause mortality and adverse cardiac arrhythmic events.

**METHOD**

Seventy patients were subjected for history, clinical examination and investigation.

**CONCLUSION**

The present study concludes as under

1. Out of seventy cases of Acute ST elevation Myocardial infarction, there were nine deaths in our study, in Group A out of thirty three cases, 1 (3.03%) death. In group B out of twenty six cases, 5 (19.23%) death. In Group C out of eleven cases 3 (27.27%) death. Prevalence of mortality was significantly higher in Group C and B which was lower in Group A.

2. There was significant correlation of AGE and Mortality in Group A, Group B, Group C, (P<0.005) which was statistically significant as the Age advanced proportion of mortality increases significantly.

3. There was statistically significant correlation of mortality and diabetes mellitus. In group A, B, and C,
which indicate there were significant association between diabetes mellitus and mortality in coronary artery disease. But there was no statistically significant correlation between hypertension and smoking in group A, B and C, (P>0.005) indicate that smoking and hypertension are independently associated with mortality.

4 There was statistically significant correlation of mortality and Lipid profile in group A, B, and C, (P<0.005) Which indicate there were significant association between Lipid profile and mortality in coronary artery disease.

5 The present study revealed the fact of very high prevalence of mortality in acute myocardial infarction presented with distortion of terminal portion of QRS complex and fragmented QRS complex in ST elevation myocardial infarction on admission.

6 Distortion of terminal portion of QRS complex on admission ECG had higher mortality probably due to larger the infarct size which is assess by clinical assessment and evidence of left ventricular failure.

7 fQRS represents myocardial scar or inhomogeneous myocardial conduction or a marker of depolarization abnormality. It is also marker of poor prognosis in patients with acute MI. It is a predictor of ventricular arrhythmic event in patients with ischemic cardiomyopathy.

SUGGESTIONS AND LIMITATIONS

1. Sample size was small hence the results of the study could not be generalized to the population. Studies with sample size large enough are recommended to generalize the results to the population.

2. Cases in the study group had not undergone coronary angiography hence the severity of the CAD could not be related with distortion of terminal portion of QRS complex and fragmented QRS complex in ST elevation myocardial infarction.

3. Though Killip class may correlate with LV function in general, it cannot replace echocardiography LVEF. A patient with STEMI with large infarct may present with low systolic BP due to forward failure and still no pulmonary congestion and a low Killip class. Due to non-availability of round the clock expertise services for echocardiography evaluation, LV function assessment was based on clinical assessment.

4 Large scale further experimental studies are needed to explain the exact Interplay between fragmentation of the QRS and survival in patients with Acute Myocardial Infarction.
P-209 A Case of Dermatomyositis Mimicking Cervical Myelopathy

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Dermatomyositis (DM) is a part of autoimmune disorders classified as idiopathic inflammatory myopathies (IIM). Very often a case of dermatomyositis presents as a part of paraneoplastic syndrome. We report a case of dermatomyositis presenting as quadriparesis.

A 48-year-old female was referred to civil hospital Ahmedabad, with chief complaints of Difficulty in standing from sitting position, combing hair and lifting had from pillow since 3 months, low grade fever and malaise and radiating pain along the neck. Her MRI whole spine screening showed hematoma along C3-C6 levels. However on examination there was diffuse hyperpigmentation with focal hypopigmented patches over lips and lower extremities with generalized erythematous rashes with skin thickening. Her higher mental functions and cranial nerves were intact. Motor examination revealed predominantly proximal weakness of grade 1 and 3 in upper and lower limbs respectively. Her reflexes were diminished and muscles showed hypotonia. On investigation her Erythrocyte Sedimentation Rate (Westergren) was 110 mm with total serum creatine kinase of 2150 (22 to 198 u/l). Her chest X-ray, HRCT and thyroid profile were normal. Her ANA profile was positive for Anti-Mi2 antibodies. The EMG studies revealed increased spontaneous activity with high frequency low amplitude polyphasic potentials suggestive of chronic myositis. Biopsy from the involved skin on the dorsal aspect of the right forearm revealed hyperkeratosis, thickened basement membrane, vacuolar degeneration of basal keratinocytes, with fibrosis of the stroma and mild infiltration of chronic inflammatory cells. Based on this evidence a diagnosis of dermatomyositis was made and the patient was started on oral steroids. on follow up at 3 months resolution of her symptoms was observed.
P-210 Pulse Oximetry Screening Before Discharge for Detection of Critical Congenital Heart Disease in Post Natal Ward in Tertiary Care Center in South Gujarat

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Introduction:
Critical congenital heart disease is a leading cause of morbidity and mortality in newborns. Pulse Oximetry screening is a feasible, cost-effective, non-invasive technique to detect the percentage of oxygen saturated hemoglobin. The objective is to detect the critical congenital heart disease which require Medical, Surgical or any other intervention at any point of time and to prevent morbidity and mortality related to late detection or failure of detection.

Method:
Data collection upon 1500 neonates in post natal ward of gestation ≥ 37 weeks at age of 24-72 hours between September to November, 2016 with following inclusion criteria: 1) no prenatal diagnosis/suspicion of congenital heart disease, 2) informed parental consent orally. The pulse oxymeter was placed on the neonate's all 4 limbs and the reading taken after 30 seconds. The criteria of study are: On initial screening saturation ≥ 95% can be discharged, 90-94% saturation repeat screening 6 hours later and saturation <90% refer for further investigation and cardiology opinion and echocardiography.

Results:
Results of current study showing 12/1500 neonates have false positive rate (0.8%). All of these neonates were rechecked 6 hours later and had saturation ≥ 95%, 9 neonates (0.6%) have persistent low saturation (<90%), so admitted in NICU and Chest x-ray, Septic Profile and Echocardiography done which show 3 neonates (0.2%) have critical congenital heart disease (Hypoplastic left venticle-1, Tetralogy of Fallot-2) and other 6 neonate (0.4%) had normal Echocardiography and have other than cardiac condition (Respiratory condition and Sepsis).

Conclusion:
Pulse oximetry should be employed for screening before discharge of neonates from post natal ward as routine practice to detect congenital heart disease and to avoid missed/late detection. It is cost-effective and very useful as basic procedure where echocardiography is not easily available and superior to other screening procedure.
P-211 Myotonic Dystrophy (Steinert’s Disease)

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Myotonic dystrophy type 1 also known as Steinert’s disease is an autosomal dominant condition that affects skeletal and smooth muscle as well as eye, heart, endocrine and central nervous system. It is characterized by muscle weakness. They have typical “hatched faced” appearance due to temporalis, masseter and facial muscle atrophy and weakness. Palatal, pharyngeal tongue involvement produce dysarthric speech, nasal voice, swallowing problem. They have spinal deformities, foot deformities (equinus deformity, club foot, claw toes etc). Genetic analysis reveal that unstable CTy expansion in the 3’ untranslated region of the myotonic dystrophy protein Kinase gene on chromosome 19q133. In EMG NCV evidence of myotonia is present. Muscle biopsy shows muscle atrophy.

P-213 A Case Series on Gitelman Syndrome

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Introduction: Bartter syndrome and Gitelman syndrome (also called tubular hypomagnesemia-hypokalemia with hypocalciuria) are autosomal recessive disorders with characteristic sets of metabolic abnormalities. These include hypokalemia, metabolic alkalosis, hyperreninemia, hyperplasia of the juxtaglomerular apparatus (the source of renin in the kidney), and hyperaldosteronism. Gitelman syndrome is due to a defect of the thiazide-sensitive NaCl transporter in the early distal renal tubule. Bartter syndrome is caused by one of several generic mutations that impair the function of the Na-K-2Cl transporter in the thick ascending limb of Henle that is inhibited by loop diuretics.

Cases: Case 1 was of a 42 year old male, who presented with diffuse lower abdominal pain and reduced appetite had Hypokalemia with metabolic alkalosis. He was diagnosed with Gitelman’s Syndrome with Molar ratio and TTKG.
Case 2 presented with Hypotension with clinical signs of hypocalcemia. Her investigations showed Hypokalemia, Hypocalcemia, Hypomagnesemia with metabolic alkalosis with low Molar ratio and elevated TTKG.

Discussion: Gitelman’s syndrome (GS) is inherited renal tubular disorder leading to increased urinary loss of sodium and potassium, low blood pressure, and metabolic alkalosis(4). GS is caused by loss-of-
function mutations in SLC12A3 encoding thiazide-sensitive sodium-chloride cotransporter (NCC) of the initial DCT (5). GS is very often asymptomatic. Patient usually presents after the age of 6, and may present in early adulthood. Both patients presented with refractory hypokalemia and on further evaluation detected to have Gitelman syndrome. Importance of diagnosing this condition would be to prevent symptoms, sometimes life threatening arrhythmias and treating with simple medication like aldosterone antagonist, thus avoiding excess supplements of potassium.

Conclusion: Gitelman's and Bartter’s Syndrome are both easy to diagnose with an algorithm based approach using clinical clues and laboratory tests. Genetic testing is not required for diagnostic purposes as distinguishing between the various genotypes does not confer any special advantage in determining prognosis or affecting approach to treatment. The treatment is straightforward as seen in our case reports with patients recovering well to be symptom free for long periods.

P-214 Subacute Sclerosing Panencephalitis Presenting as Acute Disseminated Encephalomyelitis

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Subacute sclerosing panencephalitis (SSPE) is a chronic encephalitis of childhood and young adolescence due to persistent measles virus infection of the central nervous system. In majority of cases onset occurs from 5-15 years of age. In a non-immunized population, the average onset is 8 years. Children with SSPE had experienced natural infection with the rubeola virus at an early age, half before age 2 years. SSPE generally occur 5-10 years after measles infection. In the early stages of the disease behavioral and personality changes is followed by myoclonic jerk and convulsions. In later stages dementia, stupor and coma develops. Diagnosis is achieved by typical clinical findings, measles antibody titer increase in cerebrospinal fluid (CSF) and serum, high amplitude slow, sharp waves in EEG. Prognosis is poor and death ensues in about 3 years after the diagnosis. Here it is represented a 14-year-old boy with involuntary movements in both hands, drop attacks while walking, ataxia and stupor. DUE to suggestive radiological and clinical findings and a history of recent mumps infection he was thought to have acute disseminated encephalomyelitis initially and give treatment. But due to clinical deterioration and detection of anti measles IgG in serum and CSF, SSPE diagnosis was confirmed. With this SSPE case presenting initially as ADEM, the author tried to emphasize that presentation of SSPE may clinically and radiologically be diverse and a thorough differential diagnosis is mandatory for a definite diagnosis. (Indian J medicine 2006; 73 (12):1119-1121) e-mail: serdarcomert73@yahoo.com.tr; serdarcomert@superonline.com
P-215 A Case of Homozygous Delta-Beta Thalassemia Which Present as Splenomegaly with only Hbf on Electrophoresis

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On hemoglobin electrophoresis presence of only HBf is seen in hereditary persistence of fetal hemoglobin (HPFH) and delta beta thalassemia. In our case, patient presented with abdominal pain since 12 days with mild hepato splenomegaly with no past blood transfusion history, with low MCV, with low MCHC, normal RDW, retic count, s.feritin, LDH near normal hemoglobin, elevated ESR with normal RFT, bilirubin and SGPT and only HBf on hemoglobin electrophoresis with no previous blood transfusion history. A diagnosis of delta beta thalassemia was made. It present clinically as thalassemia intermedia but on HB electrophoresis is similar to HPFH.

Case Summary
A 33 year old Hindu male patient presented as abdominal pain in left hypochondria region with low intensity in nature, non radiating since 12 days. No complaint of nausea or vomiting or fever or breathlessness and no history of any previous blood transfusion. Patient was conscious, oriented, haemodynamically stable, non icteric without anemia. Abdominal examination showed mild splenomegaly. Baseline CBC, RFT, LFT investigation showed low MCV, near normal HB, low MCH, low MCHC, normal retic count, normal RDW with slightly increased ESR with normal RFT and LFT. On further investigation s.feritin was normal and peripheral smear showed mild microcytic hypochromic anemia and nestroft screening was positive and Meltzer index <13 and abdominal ultrasound showed mild hepatosplenomegaly with normal echotexture. On hemoglobin electrophoresis only hemoglobin f was seen. Viral markers namely HBV, HCV and RVD were negative. A diagnosis of homozygous delta beta thalassemia was made. His clinical presentation was similar to beta thalassemia intermedia with near normal hemoglobin, no icterus and mild splenomegaly. Even the retic count was normal. His HB electrophoresis was similar of HPFH with 100% HBf and no HBA or HBA2 (unlike beta thalassemia). This proves that delta beta thalassemia and HPFH are different spectrums of the same disease. In HPFH, there are no clinical symptoms and laboratory indices are normal.
P-216 Postpartum Hypernatremic Encephalopathy with Osmotic Extrapontine Myelinolysis and Rhabdomyolysis
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Post-partum female 15 days after delivery presented to our hospital with H/o fever, irrelevant and slurring of speech, difficulty in walking and standing. Clinical diagnosis Acute encephalitis, possibly Viral vs. Septic Encephalopathy was considered but MRI brain shows changes of Cerebral encephalopathy with Extrapontine myelinolysis and Laboratory investigation revealed hypernatremia and elevated CPK. She was treated with 0.45% saline and gradual correction of Na and patient improved. We are reporting a case of Hypernatremic encephalopathy with osmotic extrapontine myelinolysis and rhabdomyolysis.

P-217 A Rare Case of Maple Syrup Urine Disease
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Abstract Body: Maple syrup urine disease (MSUD) is a rare inborn error of metabolism characterized by typical urine odor. The deficiency of branched-chain ketoacid decarboxylase enzyme is responsible for the clinical abnormalities. The classical disease usually manifests in the neonatal period with lethargy, refused feeding, seizures and death.

We report our experience with a 9 day old child who presented to VS Hospital, Ahmedabad with multiple episodes of convulsions, vomiting since one day after birth. H/O bad obstetric history was present. H/O similar episodes of neonatal convulsions to the siblings in first week of life was also given. O/E Lethargy, poor feed and syrup like odour of the urine was observed.

Patient underwent an MRI brain, which revealed faintly bilateral symmetrical hyperintensity in the bilateral thalami, posterior limb of internal capsule, globus pallidi, brainstem, also involving deep cerebellar white matter on t2w images. These hyperintensities show marked water motion restriction on diffusion weighted images and appear dark on adc images.

Metabolic Workup at Lal pathology labs in Delhi revealed increased level of branched chain L amino acids in blood and urine. Increase level of Isoleucine, Leucine and Valine amino acid in the blood and urine. Suggestive of deficiency of “Branched chain alpha ketoacid dehydrogenase complex” seen in “MAPLE SYRUP URINE DISEASE.

Patient was advised frequent careful monitoring of blood chemistry and was also advised a special diet guided by a dietician to keep MSUD under control.
Intravenous drug abuse contributes to considerable illness burden in developed and developing countries. Infective endocarditis (IE) is a recognized complication of intravenous drug abuse. We describe a case of Tricuspid Valve Endocarditis mimicking pulmonary tuberculosis. A 40 years male patient, intravenous drug abuser presented with history of fever, rigors, night sweats, cough, pleuritic chest pain, and dyspnea of three months duration. He was seen by tuberculosis specialists and was initiated on anti-tuberculosis treatment based on radiological findings, but his sputum was negative for acid fast bacillus. Clinically, he was toxic, tachycardia, tachypnea, febrile with elevated jugular venous pressure. There was a pan systolic murmur over the tricuspid area, left lower zone crepitation's, and mild pedal edema. Chest X-ray showed bilateral minimal pleural effusion and left lower lobe consolidation. Laboratory work-up showed leukocytosis with neutrophilia and raised ESR. Transthoracic echocardiography showed dilated right atrium (RA) & right ventricle (RV) with Large vegetation on Septal Tricuspid Leaflet. There was severe tricuspid regurgitation with calculated right ventricular systolic pressure of 41mmHg & right ventricular dysfunction. Blood culture were positive for methicillin-sensitive Staphylococcus aurous. He was treated with intravenous antibiotics for 4 weeks according to culture and sensitivity reports. After a week of antibiotic therapy, he was afebrile and clinically stable. Repeated echocardiograms showed persistence of vegetation, with severe tricuspid regurgitation, and right ventricular dysfunction. He was thus advised for tricuspid valve replacement.
P-219 A Case of Alport Syndrome
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Introduction: Alport syndrome (AS) is a predominantly X-linked hereditary nephritis associated with high-tone, sensor neural deafness and characteristic eye signs owing to mutations in COL4A3, COL4A4, and COL4A5 leading to disturbance in the production or assembly of the type IV collagen network.

Case report: A 22 year old Hindu male presented with breathlessness and edema feet for 1 month. History was notable for bilateral hearing loss at about the age of 12 and demised vision for 6 months. On general examination, severe pallor and anasarca was found. Blood investigations showed a raised serum creatinine, urea and potassium; hem gram showing severe anemia. Urine routine and microscopic examination showed nephritic range proteinuria and microscopic hematuria. Ultrasonography demonstrated loss of corticomedullary differentiation in the kidney. Family history revealed death of an older sibling suffering from some visual, hearing and “kidney” complaints. Ophthalmologic findings are: Anterior lentic onus in both eyes with retinal macular flakes. Audiometry suggestive of moderate to severe sensory neural hearing loss in both ear.

Discussion: Angiotensin blockade may diminish the rate of proteinuria leading to glomerulosclerosis and thereby disease progression. AS is essentially cured with renal transplantation. The most significant and devastating, albeit rare, complication of transplantation is antiglomerular basement membrane nephritis usually develops within the first year of the transplant. Stem Cells based therapies have shown some curative potential in animal models, however, have yet to be tested in humans.

Conclusion: AL port Syndrome is a rare cause of chronic renal failure but should be considered in differential diagnosis of hematuria and proteinuria in adults if it is associated with extra renal symptoms (deafness, diminished vision) and similar family history.

(2) Chen, Dilly's; Jefferson, Barbara; Harvey ,Scott J; AL port Syndrome( X linked Hereditary Nephritis). Journal of the American Society of Nephrology 14(3) 690-698.
We report the case of a 32 years old woman with newly detected HIV positive status who presented as Opsoclonus myoclonus ataxia syndrome (OAMS) very rarely reported in early literature. Opsoclonus myoclonus ataxia syndrome is a rare neurological disorder of unknown causes which appears to be the result of an autoimmune process involving the nervous system. It is extremely rare that affects 1 in 10,000,000 people per year.

Objective: To describe Adult onset OAMS.

Introduction: OMAS (Opsoclonus Myoclonus Ataxia syndrome ) is characterized by continuous multidirectional saccadic eye movements accompanied by generalized myoclonus and less frequently cerebellar ataxia, postural tremor, encephalopathy, and behavioral disturbances.

Case Report: A 32 years old female presented with headache, a wide base unsteady gait and uncontrolled jerky movements of the eyes, head and fingers of the hands. Magnetic resonance imaging (MRI) brain revealed few small nonspecific subcortical white matter hyper intense foci in cerebellar hemispheres. She was newly detected HIV positive, Her CD4+ count was 234, her routine blood investigations were relatively normal, erythrocyte sedimentation rate was 48 mmHg, chest X-ray suggestive of massive pleural effusion which was tapped for analysis which shows tuberculosis type effusion. Latex-Cryptococcus antigen test and herpes simplex virus were negative. She was diagnosed as Opsoclonus myoclonus ataxia with HIV positive status, with pleural TB.

Discussion: There are less than a handful case reports on OMAS occurring in HIV-patients. All cases were reported in four different stages of HIV infection:- Initial neurological presentation, Immune reconstitution syndrome, At the time of seroconversion and at the time of tuberculosis reactivation. Opsoclonus myoclonus ataxia syndrome is usually associated with Neuroblastoma in children and associated with breast and small cell lung cancers, toxic-metabolic, post infectious, or idiopathic. Only few cases were reported in HIV positive patients at different stages of HIV infection.

Conclusion: Adult onset Opsoclonus Myoclonus Ataxia syndrome (OAMS) associated with HIV positive status is rare. Para neoplastic and Para infectious causes (particularly HIV) should be considered. Complete remission achieved with immunotherapy is the most common outcome which we got in this case.
P-221 A Case of Insulinoma
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Objective- To describe a case of Insulinoma.
Method- We report a case with clinical, biochemical and imaging findings.
Results- We report a case of 72 years old male patient having past history of post PTCA status and hypothyroidism on regular treatment for it, who is non-alcoholic, non-diabetic and not on any hypoglycemic drugs, was diagnosed with an insulinoma having history of recurrent hypoglycemia with presenting complains of giddiness and loss of consciousness. His biochemical investigations suggestive of low blood glucose level, raised serum cortisol and serum C-peptide level. A contrast enhancing computed tomography of abdomen revealed 23*18*15 mm3 tumor in the uncus of pancreas.
Conclusion- This case illustrates the need for high clinical suspicion. Neuroglycopenia and adrenergic symptoms are often confused with acute vertigo and anxiety disorders.

P-222 A Rare Case of Subacute Sclerosing Panencephalitis
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Sub-Acute Sclerosing Pan-Encephalitis is a rare chronic, progressive demyelinating disease of the CNS associated with a chronic non-permissive infection of brain tissue with measles virus. Frequency has been estimated at 1 in 100,000-500,000 measles cases. We report a case of 10 yr old male presented with headache, mental regression, myoclonus jerks, slowness of movements and seizures since last 2 months. There was past history of measles infection in childhood. There was no family history of measles infection was found. On examination we found maskfacies, genghalten sign was present, DTRs brisk, patient was confused and not following commands well. MRI was found normal. After investigating further, EEG showed generalized slow wave complex and CSF measles antibody was positive, hence the diagnosis of SSPE was established. Symptomatic treatment (Anti-epileptic drugs) was started and patient has been referred to Pediatric Neurologist at higher center for starting of Isoprinosine and/or α-interferon. Further follow-up of patients is awaited.
P-223 An Unusual Cause of Acute Abdomen-Gastro Duodenal Intussusception

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Gastro duodenal intussusception is by far a very rare clinical entity reported in literature. 52 year old male presented with history of acute pain abdomen of 1 day duration with multiple non-bilious vomiting. Pain was predominantly in epigastrium, severe, non-radiating. On examination he had tachycardia, was afebrile, normotensive, abdominal examination revealed tenderness and guarding in epigastrium and part of hypochondriac regions; Lab investigation showed amylase-230 and lipase-146, LFT-normal, TLC-13,600. USG was apparently normal. Patient was treated conservatively by nil per orally, intravenous fluid, analgesic, supportive treatment. After 2 days of hospitalization he had melena and fall in hemoglobin, So UGI endoscopy was done which showed fundus of stomach invaginating through pylorus into duodenum, prepyloric region was pushed laterally with help of biopsy forceps to release the part of stomach trapped at pylorus, and there was sudden release of impacted part of fundus. There was a large sub mucosal mass seen in fundus along with stigmata of recent hemorrhage which led to prolapse of fundus into duodenum, after that patient got relief in his symptoms of pain and vomiting. CT scan of abdomen showed mass in fundus with normal pancreas. He had mild pancreatitis probably due to ampullary obstruction by mass and bleeding is a known complication of gastrointestinal stromal tumor. Patient get operated after few days, local resection was done and histopathological examination showed gastrointestinal stromal tumor.

P-224 Congenital Pouch Colon: A Rare Variant of Anorectal Malformation

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Congenital pouch colon (CPC) is a congenital anomaly associated with anorectal malformations (ARM) in which whole or part of the colon is replaced by a pouch like dilatation which communicates distally to the urogenital tract with a fistula. This anomaly is also referred as congenital short colon and pouch colon syndrome. CPC is seen much more frequently in Northern, North Western, and Central part of India, though there have been case reports from other part of the India and rest of the World. The incidence of CPC among all the cases of ARM has been reported to occur in 2-18% and among the high ARM is 10-26%. CPC is more common in males, with sex ratio of 3 to 4.3: 1. Male newborns present as an absent anal opening with distension of the abdomen, and 60-75% of them also present with history of meconium in urine. In females, they present as an absent anal opening, with history of passage of meconium / stool through an abnormal opening. Female child may not always present during neonatal period due to the
deflation of the bowel / pouch colon through fistulae. A large loop of bowel with single air fluid level occupying more than half of the total width of the abdomen on the plain abdominal x-ray either erect or inverted, is almost diagnostic of CPC, and it is possible to diagnose CPC pre-operatively in more than 3/4th of the cases. The standard procedure for the management of the CPC cases is three-staged procedures, although it is also possible to manage by single-stage or two-staged procedures. The cases of incomplete / partial pouch colon (type III and type IV) are best managed by the excision of the pouch and pull-through of the proximal normal colon. The cases of complete pouch colon (type I and type II) are best managed by tabularizing / coloplasty of the remaining colon, as in these cases an adequate length of colon is absent. Mortality following initial surgery for fecal diversion is quite high due to various reasons. Herein we report a case of 5-year old female child presented with congenital pouch colon in view of a rare congenital anomaly

Keywords - Anorectal Malformations; Congenital malformations; Congenital pouch colon; Pouch colon syndrome; Congenital short colon; Staged-procedures; India.

**P-225 Type 2 Renal Tubular Acidosis (RTA) - An Important Cause of Hypokalemic Paralysis**

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Bicarbonate is freely filtered, and its concentration in the glomerular filtrate is equal to that in plasma (~25 mEq/L). The majority of the filtered HCO3 (~80%) is reabsorbed in the proximal tubule and the remaining 20% is reclaimed by the loop of Henle, distal tubules and collecting tubules. Type 2 Renal Tubular Acidosis (proximal RTA) is the result of impaired reabsorption of bicarbonate in the proximal tubule. The term renal tubular acidosis (RTA) is applied to a group of transport defects in the reabsorption of bicarbonate(HCO3- ), the excretion of hydrogen ion (H+), or both. It is characterized by a relatively normal GFR, metabolic acidosis accompanied by hyperchloremia and a normal plasma anion gap. There are three forms RTA. Types 1 and 2 may be acquired or primary, whereas the most common form, type 4 RTA, usually is acquired. Type 1 RTA is a disorder of the distal nephron resulting in failure to lower urinary pH, as a result of impaired hydrogen ion secretion. Type 2 RTA (pRTA) is the result of impaired reabsorption of bicarbonate in the proximal tubule. Type 4 RTA is due to impaired ammoniagenesis leading to progressive azotemia associated with hyperkalemia. RTA should be differentiated from hypokalemic periodic paralysis because acetazolamide used in hypokalemic periodic paralysis aggravates RTA and sodium bicarbonate used in RTA aggravates hypokalemic periodic paralysis. In this poster, a case presented as gastritis & acute onset flaccid quadriplegia twice, was later diagnosed to have Type 2 RTA.
P-226 A Case of Tenofovir Induced Fatal Lactic Acidosis and Hepatitis
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Introduction
Tenofovir belongs to a class of antiretroviral drug known as nucleotide analogue reverse transcriptase inhibitor (NRTIs). Most common side effect associated with tenofovir includes nausea, vomiting, diarrhea and asthenia. Rarely tenofovir leads to severe (sometime fatal) liver disease and certain metabolic problem (lactic acidosis) but combination of tenofovir with other ART(Anti-Retroviral Therapy) like didanosine appears to lead to liver injury with microvescicular fatty liver disease and lactic acidosis. Tenofovir with efavirenz may also cause elevation of liver enzymes possibly due to drug-drug interaction.

Case Report
A 50 year old male AIDS patient named kanubhai Rathod- on ZLN regimen presented with anemia. On blood report patient had hemoglobin of 4.5 gm% with SGOT-18U/l, SGPT-30U/Land total billirubin-0.5mg/dl. So we hold ZLN and changed regimen to TLE .On third day of starting TLE patient developed severe metabolic acidosis with acute hepatitis. ABG showing PH-6.96 and HCO3-1.6, S.lactate-42 mg/dl, SGOT-2400 U/L, SGPT-2706 U/L, Total billirubin-0.6 mg/dl and he was considered as tenofovir induced lactic acidosis and acute hepatitis. Considering ART induce effects, ART was hold and patient was improved with supportive treatment within next 2 days. Both acidosis and LFT was improved.

Conclusion
Tenofovir can induce fatal lactic acidosis with acute hepatitis. It may be due to either tenofovir alone or due to combination of ART due to drug-drug interaction.

Key-Words
HIV, Tenofovir, Hepatitis, Lactic Acidosis
Allergic bronchopulmonary aspergillosis (ABPA) is a condition characterised by an exaggerated response of the immune system (a hypersensitivity response) to the fungus Aspergillus (most commonly Aspergillus fumigatus). It occurs most often in patients with asthma or cystic fibrosis. Aspergillus spores are ubiquitous in soil and are commonly found in the sputum of healthy individuals.

ABPA causes airway inflammation, leading to Bronchiectasis—a condition marked by abnormal dilation of the airways. Left untreated, the immune system and fungal spores can damage sensitive lung tissues and lead to scarring.

Case

A 32 year old housewife was referred to the department of pulmonary medicine for non responding to 2 month cat – 1 ATT for sputum negative probable pulmonary TB. Patient had persistent low grade fever and cough with mucoid whitish expectoration with minimal resolution. She was complaint with her anti TB medications.

On further inquiry patient revealed episodic breathlessness and cough with expectoration and rhinorrhea since 10 years.

Patient didn’t have chest pain, weight loss, anorexia.

On examination, patient was afebrile, with normal vital parameters, clubbing and lymphadenopathy were absent. Respiratory system examination revealed bilateral wheeze. Oxygen saturation was 98% on room air.
Hematological investigation show elevated ESR, Peripheral eosinophilia and Serum Ig E titre was 1046 IU/ml. Sputum smear and liquid culture was negative for acid fast bacilli.

CXR showed fleeting pulmonary opacities and cavitation on serial x-rays (Figure 1 to 4)

A chest HRCT scan was obtained which revealed large area of consolidation and adjacent ground glass attenuation area noted involving apical and posterior segment of right upper lobe along the chest wall and oblique fissure with heterogenous contrast enhancement and loss of airbronchogram pattern. Patchy consolidation in left upper lobe along chest wall. Discrete areas of cystic and cylindrical bronchiectasis involving both lung, many area almost completely filled with hyperdense material, predominantly in both upper lobe s giving rise to nodular apprearance, likely chronic desiccated mucoid collection. (Figure 5 to 7)

Patient was diagnosed to have allergic bronchopulmonary aspergillosis with underlying congenital bronchiectasis.

**Treatment**

Oral itraconazole and inhaled bronchodilators were initiated with resolution of clinical symptoms and improvement in radiological findings.

**Conclusion**

In a setting of poorly controlled asthma, recurrent cough with thick viscid expectoration and fever should trigger an investigation for ABPA.

Sputum negativity in a case of probable pulmonary tuberculosis with cavitation should arouse suspicion for etiology other than tuberculosis.
P-228 A Case of Fahr Disease

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Introduction


Case Report

A Patient Named Naimkhan Pathan 27 Year Old Presented With Generalized Tonic Clonic Convulsion, Who Was A K/C/O Epilepsy. Patient Was Taking Tb Phenytoin + Phenobarbital Regularly For Last 8 Years. Before That He Was On Tb Valproic Acid For 2 Years. He Was Admitted With Convulsions (Gtcs) Many Times Even With Medication In Last 10 Years. Patient’s Cbc, Rbs And S.Sodium, Potassium Were Normal. Patient Had Eeg Report Suggestive Of Generalized Epileptic Activity Of Spike And Waveform Along With Slowing. Drug Levels In Patient’s Serum Were Also Normal. So We Went For Mri Brain Which Revealed B/L Symmetrical Calcification In Basal Ganglia, Thalami And Cerebellar Hemispheres-Suggest Fahr’s Disease Or Hypoparathyroidism. His S.Calcium And Parathyroid Were Low (5.5 And 4.9 Respectively).Thus He Was Diagnosed As Having Fahr Disease Due To Hypoparathyroidism.

Conclusion

Thus Patient on Regular Antiepileptic Therapy with Repeated Convulsion, Hypoparathyroidism Or Fahr’s Disease Should Be Suspected.

Key-Words

Fahr’s Disease, Convulsion, Hypoparathyroidism
P-229 A Case of Immune Reconstitution Inflammatory Syndrome (Iris) Presented as Cardiac Tamponade in Known Case of HIV with Pulmonary Tuberculosis

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Introduction
Immune Reconstitution Inflammatory Syndrome (Iris) Affects 30-43% Of Hiv And Tb Co-Infected Patient After Starting Highly Active Antiretroviral Therapy (Haart). Pericarditis And Pericardial Effusion Are Rare Manifestations Of Iris. This Complication Resolved After Treatment With Steroids. Anti Tuberculous Treatment Were Not Interrupted.

Case Report
A 26 Years Old Male Patient Named Suresh Kanuram Boriwal - Known Case Of Hiv On Tle Regimen Presented With Chest Pain And Breathlessness. His 2d Echo Suggestive Of Pericardial Effusion. His Pericardial Fluid Cell Cytology Showing- Positive For Acid Fast Bacilli, Ada- 125 (Positive), 3000 Cells (65%-Polymorphs And 35%- Lymphocytes), Glucose- 24mg/Dl, Protein-4.5.And He Was Considered As Iris Presented As Cardiac Tamponade. Then Art Was Hold And Patient Was Improved With Steroids And Akt.

Conclusion
Iris Can Be Presented As Cardiac Tamponade In A Patient Of Hiv And Tb Co- Infection After Starting Of Haart.

Key-Words
Cardiac Tamponade, Iris, Hiv And Tb, Haart
Primary Sjogren's syndrome is an autoimmune disease wherein there is lymphocytic infiltration of salivary and lacrimal glands. This inflammation is thought to be caused by B-lymphocytes. The most common clinical feature of Sjogren’s is dryness of the mouth and eyes. The hematological abnormalities usually seen in Sjögren’s syndrome are lymphopenia, leucopenia, and thrombocytopenia. Very few case reports are available regarding presentation of Sjögren's syndrome in elderly female as a hemolytic anemia. A cohort study involving large number of patients with Sjögren’s syndrome done by Ramos-Casals M et al. has concluded that hemolytic anemia is a very rare hematological presentation of Sjogren’s syndrome. Here, we report an elderly female patient who presented with AIHA and found to have primary Sjögren's syndrome.

We had a 66 years old female presented with history of dyspnea on moderate exertion and easily fatigability for 20 days. She did not have any significant medical illness in past. On admission her vitals were normal. Her peripheral blood smear was suggestive of macrocytic normocytic anemia with hemoglobin of 3.4, mean corpuscular volume 126, with total count of 16000 and normal platelet with no parasite. Dengue NS1 antigen, IgG Ig M were negative. Her LDH was twice the upper limit, with reticulocyte count more than 2.5. Her liver function tests were suggestive of altered albumin globulin ratio. Her creatinine, potassium, arterial blood gas analysis and thyroid stimulating hormone was normal. Serum protein electrophoresis was negative for monoclonal gammopathy. To rule out infection as an etiology of hemolysis procalcitonin was done which was with in normal range. Blood and urine culture didn’t isolate any organism. For further work of anemia direct cooms test and indirect cooms test were sent which were positive. HIV, HBsAG, HCV were negative.USG (A+B) was normal. Her ANA profile by IB was suggestive of strong positivity for SS-A /RO 60 and SS-B/RO52. Bone marrow biopsy was planned for ruling out malignancy but patient was not ready for same.

She was transfused with PCV. For further diagnosis of Sjögren’s syndrome Schirmer test was done which was negative. Patient was referred to rheumatologist for further treatment.
P-231 A Case Of Atypical Posterior Reversible Encephalopathy Syndrome (PRES) In De Novo Late Post-Partum Eclampsia

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Introduction
PRES is a characterized by headaches, altered mental status, seizures, and visual disturbances and is associated with characteristic reversible lesions on neuroimaging in a severe arterial hypertension setting. Postpartum eclampsia is a rare and can either be early (within 48 hrs of delivery) or late postpartum eclampsia (>48 hours, but < 4 weeks postpartum). Typically, PRES involves the parieto-occipital lobes. When regions of the brain other than the parieto-occipital lobes are predominantly involved, the syndrome is called atypical PRES which is rare.

Case Report
A 25-year old lady, primigravida, at term with no significant past medical history presented on the 3rd day of postpartum with h/o sudden onset of giddiness, headache, vomiting, bilateral blurring of vision followed by generalized tonic-clonic seizure. On examination her arterial blood pressure was 130/90 mm Hg. She was in post-ictal state and after she regained consciousness was noticed to have cortical blindness. MRI Brain done showed hyperintense lesions (in T2 and FLAIR sequences) involving white matter in bilateral parieto-occipital, bilateral cerebellum, patchy bifrontal regions and gray matter involving bilateral caudate, globus pallidus and right thalamus which were showing free diffusion. In subsequent days her BP was controlled and she recovered from her blindness gradually. With antiedema measures and BP control she improved and was discharged in stable condition with oral nifedipine for 2 weeks. MRI brain done 6 weeks later revealed normal study.

Conclusion
In the postpartum period when headaches and/or visual changes are associated with eclampsia with or without pre-existing preeclampsia one needs to be aware of the possibility of PRES as diagnosis, even if the pregnant patient had no prior history of hypertension or proteinuria and MRI brain examination is recommended for early diagnosis and treatment of typical or atypical PRES.

Key-Words
Atypical PRES, Post-partum eclampsia, Hypertension
P-232 Intra Thoracic Thyroid

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The fact that certain goiters are partly or wholly intrathoracic is now accepted as a serious and not uncommon pathologic condition. Intrathoracic goiters develop when a single adenoma or one or more of the nodules of a multiple adenomatous goiter descend through the superior thoracic strait into the bony thorax or it can be arise from ectopic thyroid tissue deep within the mediastinum which is quite rare.

Case
A 60 year old female was referred to the department of pulmonary medicine for chief complaint of cough with scanty mucoid whitish expectoration since 15 days with troat iritaion and nasal discharge since 8 days, generalised weakness since 1 month and non resolving mediastinal nodal lesion under category-II for 2 month. patient was a known case of hyperthyroidism from last 13 years and subtotal thyroidectomy done in 2005 for diffuse toxic goiter and regularly taking her antithyroid medications. Patient didn’t have chest pain, nausea, vomiting, dysphagia, anorexia, weight loss. A careful history revealed patient had history of bilateral cervical lymphadenopathy before 23 year for that she took 6 month AKT.

On examination, patient was afebrile, with normal vital parameters, clubbing and lymphadenopathy were absent. patient having bilateral ptosis. Respiratory system examination was normal. Oxygen saturation was 98% on room air.

Hematological and biochemical investigations were normal. Thyroid function tests were also in normal range. Sputum smear was negative for acid fast bacilli. Cervical sonography revealed enlarged right lobe of thyroid gland.

CXR shows right side para trachel opacity extending from posterior end of first rib to posterior end of sixth rib which was persistant after 2 month completion of of category-II.
P-233 A Case Report on Concurrent Dengue and Malaria (Plasmodium Falciparum and Vivax)
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Dengue and Malaria are tropical infections which are both endemic in this part of the country. They are vector borne diseases with Plasmodium being transmitted by female anopheles mosquito bite and Dengue virus being transmitted by the bite of Aedes mosquito. Hence since both the infections are transmitted by different vectors, Dual infections were only described for the first time in 2005 and only limited case reports are there in tropical region. Here is a case of a 22 years Primigravida with 22 weeks of amenorrhoea who had presented with similar picture.

A 22 years old, female, Primigravida with 22 weeks of amenorrhoea, presented to ER with h/o fever, generalized weakness, arthralgia, myalgia, for 10 days. She had visited a medial setup with these complaints and received antimalarials, antibiotics and intravenous fluids for 3 days. On presentation she was hemodynamically stable. Initial investigations were s/o pancytopenia, hyponatremia, hypokalemia, raised CRP and Dengue IgM, IgG was positive with Peripheral smear s/o 3-4 rings and trophozoites of P. Vivax and 6-8 rings and 1-2 gametocytes of P.Falciparum. She was started on ACT, Ceftriaxone, Clindamycin. Her G6PD level sent was within normal limit. She received 4 PCV. She received injectable artisunate for 4 days and tablet artisunate 60mg for 3 days with ceftriaxone and clindamycin for total of 6 days. On the day of discharge, her peripheral smear was still s/o 1-2 gametocytes of P.Falciparum. She was advised cefixime for 2 days and clindamycin for 2 days and was given chloroquine once weekly till end of pregnancy. She had followed up in the OPD after 22 days of admission and peripheral smear done on follow up showed no parasites. Subsequent fetal usg did not show any fetal abnormality.

P-234 Hoffmann`s Syndrome as Manifestation of Hypothyroidism: A Rare Presentation
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Hypothyroidism is a common disorder and its manifestations are associated with several systemic disease like cardiovascular, neurologial and musculoskeletal system and in the musculoskeletal system involvement is unclear, although cross reactivity of anti-thyroid auto antibodies or auto-reactive T cells with other organs may play a significant role. Presenting as myopathy and muscular hypertrophy of calf muscles a very rare presentation.[1]Hoffmann syndrome is a specific form of hypothyroid myopathy, which causes proximal muscle weakness and pseudo hypertrophy of calf muscles due to connective tissue deposition. [2]Similar presentation of calf muscle hypertrophy with weakness is also seen in Duchenne and Becker muscle dystrophy, focal myositis, sarcoid granulomas, and amyloid deposits in muscles. Thyroid myopathy is reversible with treatment.
INTRODUCTION:
Lymphoma of the urinary bladder can be either primary or secondary. Secondary occurs in 10% to 25% of leukemia’s or lymphomas and in advanced-stage systemic lymphoma. Primary lymphomas of the urinary bladder are extremely rare, representing 0.2% of all extra nodal lymphomas and <1% of all bladder tumors. High grade tumors are rarer, making up 20% of the reported cases with the most common type being diffuse large B-cell lymphoma.

CASE DESCRIPTION:
A 68 year old male with no chronic illnesses presented with complaints of groin swelling and abdominal distension of 1 week duration. USG abdomen showed thickening of urinary bladder, ascites, and left inguinal hernia. MDCT of chest and abdomen revealed thickened bladder and enlarged lymph nodes in diaphragmatic pleura, pretracheal, subcarinal and para-esophageal region with average size of 11x9 mm. Biopsy from the wall of urinary bladder was taken and showed diffuse lymphoid cells lined by unremarkable urothelium. IHC of the tumor cells expressed LCA, CD-20 and CD-10. Mib-1 labeling index was more than 90%. Hence was started on R-CHOP regimen with which he improved.

DISCUSSION:
Lymphoma of urinary bladder can be classified into three groups one of which is lymphoma presenting in the bladder as the first sign of disseminated disease. Most of reported cases of primary bladder lymphoma have hematuria as primary complaint while this patient presented with only mild urinary symptoms uncommon in lymphoma. Also he did not have any lymphadenopathy which is also common in lymphoma.

REFERENCES:
OP-1 Nasolabial Flap for Reconstruction of the Moderate to Large Defects of Lips Following Cancer Resection

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Background:
Squamous cell carcinoma of the lower lip is frequent, and radical excision sometimes leads to complex defects. Many lip repair techniques are aggressive requiring general anesthesia and a prolonged post-operative period. The nasolabial flap, while a common flap for the repair of other facial defects, is an under-recognized option for the reconstruction of the lower lip. We describe the use of nasolabial flap for the repair of a large defect of the lower lip in 14 patients, with good functional results and acceptable cosmetic outcome. We believe the nasolabial flap is a good alternative for intermediate-to-large lower lip defects.

Methods:
In this study we analyzed the utility of nasolabial flap for the reconstruction of moderate to large lower lip defect in 14 lower lip cancer cases.

Results:
All the defects were reconstructed in a single stage. We achieved good lip seal and at least good function in eating and speaking. There was no entropies of the lip, and all the reconstructed lips preserved their height.

Conclusion:
The nasolabial flap is a versatile, reliable local flap for reconstruction of medium to large size lower lip defects with good cosmetic outcomes and negligible donor site morbidity.
Head and neck tumor is frequently encountered clinically, but the list of differential diagnosis of neck lumps is lengthy. Consequently, the major concern of diagnostic procedure is to effectively narrow the possibility, and finally make an accurate diagnosis. Ultrasound-guided core biopsy (USCB) has been well established in many medical fields as the standard tissue sampling procedure, with less harm than open biopsy (OB) and more pathological information than ultrasound-guided fine needle aspiration (USFNA). In addition, using the small-cutting needle, USCB can be easily and safely performed for head and neck lesions. In this review, we present our optimal procedure of applying USCB and review its roles in head and neck, including cervical lymph nodes, thyroid tumors, salivary tumors, pediatric head and neck lesions, cervical infectious diseases, head and neck cancer and aerodigestive tumors. The procedure-related bleeding and tumor seeding are rarely reported even after 7-year follow up in the literature. The head and neck surgeons are competent to take care of any unpredictable complications caused by USCB. According to our experience, USCB can be utilized as a powerful tool in surgeon's hands to explore the possibilities of doing tissue sampling in many areas of head and neck.

Method:
A retrospective analysis on 181 core-needle biopsies in 88 patients was performed to determine the diagnostic efficacy of ultrasound-guided core-needle biopsies in the head and neck.

Result: We experienced 100% success in obtaining high quality histopathologic specimens. The target tissue was correctly sampled in 80 of 88 patients. In these patients the sensitivity, specificity, and accuracy rate of core-needle biopsies in differentiating benign from malignant cervicofacial lesions was 98.1%, 100%, and 98.8%, respectively.

Conclusion:
Ultrasound-guided core-needle biopsies can be recommended as a safe and reliable technique in the diagnosis of cervicofacial masses with a high diagnostic yield. It obtains tissue samples of high quality and represents a sufficient alternative to open biopsy even in the diagnosis of lymphoma.
**OP-3  Near Total Laryngectomy Complications, Function and Survival: A Sixteen-Year Institutional Experience**

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**Background-** Near total laryngectomy (NTL), a voice preserving dynamic tracheopharyngeal shunt procedure, is an alternative to total laryngectomy in selected laryngeal & hypopharyngeal cancers, but has not gained wide acceptance due to perceived fear of surgical complexity. We report our institutional experience with NTL during last 16 years done using the modified Pearson technique.

**Methods-** A retrospective analysis was carried out from Feb 1998 to Apr 2014. We studied 63 patients who underwent NTL with respect to complications, functional results & survival outcome. Survival was analysed using Kaplan-Meier method.

**Results-** Sixty two male patients & one female patient with median age of 56 years were studied. Two patients died in postoperative period (Postop day 6 &26) due to cardiopulmonary event. Median hospital stay was 12 days (range 6-58 days). Pharyngocutaneous fistula was most common complication (25 of 63 patients, 39.6%) & most (20 of 25) were managed conservatively with five patients requiring surgical intervention. Other complications were - aspiration in eight patients (12.7%); wound infection or dehiscence in 5 patients (7.9%); shunt stenosis in 2 patients (3.2%); tracheostoma narrowing in 5 patients (7.9%) requiring stomal refashioning in four of these; chyle leak in one patient (1.6%). Good quality speech was attained by 43 patients (68.2%); 10 patients (15.8%) had fair quality voice; 4 patients (6.3%) obtained bad voice; 5 patients (7.9%) did not develop speech at all. Fifty patients (79.3%) developed normal swallowing function; 12 patients (19%) developed dysphagia due to neopharyngeal stricture but all were managed successfully with dilatation. Ten patients (15.8%) had neck recurrence (4 salvaged with surgery); 5 patients (7.9%) had local recurrence (one salvaged with surgery); 4 patients (6.3%) developed distant metastasis (3 pulmonary & one spinal); 2 patients (3.2%) developed new primary (1 base tongue & other tonsil/ soft palate). Two-year and 5-year disease free survival was 66.1% and 51.2% respectively.

**Conclusion-** NTL is an oncologically acceptable alternative to total laryngectomy for selected group of lateralised laryngeal and hypopharyngeal cancer. It gives good functional results with normal swallowing and physiologic maintenance free speech in majority of patients. Most of the complications are well tolerated and can be managed conservatively.
OP-4 Tumor Thickness as a Predictive Marker for Cervical Node Metastasis in Early Tongue Carcinoma: A Single Centre Study

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Background
Tumor thickness appears to be a strong predictor for cervical node metastasis in carcinoma tongue. Aim of present study is to know tumor thickness with oral ultrasonography & its relation with cervical node metastasis in early carcinoma tongue (T1/T2, N0), so need for elective neck dissection.

Material & Methods
The present prospective study comprised of 100 patients with diagnosis of early carcinoma tongue (cT1/T2/N0), from September 2013 to September 2015. Sonography of tongue using 7.5 MHz probe done in all cases to know depth of lesion. All patients underwent WLE of tongue+ MNDII. Final histopathological findings were compared with pre-op clinical and radiological findings.

Results
Present study was male predominant study, (M:F-2:1). Mean age was 59.12 years. Every patient underwent oral ultrasonography for tumor thickness. On ultrasonography 22, 55 and 23 patients showed tumor thickness of up to 2mm, 2-4mm and >4mm, respectively. On histopathology 20, 60 and 20 showed tumor thickness for above said range. So, there was a significant correlation between measurements by intraoral ultrasonography and the histopathology. On HPR, positive node observed in 25 patients which was increased with tumor depth i.e. 60 % for depth >4 mm. There was no node in patients with depth upto 3mm.

Conclusion
Tumor thickness is a significant predictor of nodal metastasis and elective neck dissection should be considered when this thickness is >3mm.
OP-5 Role of Elective Neck Dissection Vs Neck Irradiation in Locally Advanced Maxillary Sinus Carcinoma

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Objectives: To discuss and review the role for elective dissection of the neck VS neck irradiation in locally advanced maxillary squamous cell carcinoma. Presently, neck still remains a conundrum and individualised based of tumour extent, surgeon preference and expertise and institutional protocols. There is a need for, review and formulation of a systematic approach to tackling the neck. The risk of occult metastases in neck nodes is higher for T3-4 tumours. The rate of nodal relapse in the N0 neck without elective treatment is 8-15%. With elective irradiation the nodal relapse rate decreases. However, most nodal relapses are accompanied by local failure or distant disease. Local failure remains the most common site of failure and cause of death.

Materials And Methods: A retrospective analysis of case files of patients seen at our institute between years 2010 TO 2014. All patients proven with the biopsy report SCC operated at our institute were included in the study and a follow up recorded with attention to local recurrence, nodal recurrence, isolated nodal recurrence and overall mortality and analysed subsequently. A total of 125 patients were included in the study.

Results: Overall recurrence of 70% was documented either as local, local plus nodal relapse, or isolated nodal recurrence. Out of these, primary tumour (local) recurrence was statistically out numbering others forms of disease failures. Therefore elective neck dissection is not routinely indicated in the clinically N0 neck T1-2 disease; and neck irradiation of the neck and primary should be routinely performed for T3-4 lesions. Those patients who do develop isolated nodal disease without primary recurrence in the follow up period can be subject to neck dissection at a later time to avoid the morbidity of neck dissection during the first surgery.

Conclusion: Treatment failure occurs in 70% of all patients, with local recurrence by far the most common site of treatment failure in any stage; local failure is rarely amenable to salvage therapy Most cervical relapse is accompanied with uncontrollable primary or distant relapse, explaining the poor survival of those with cervical relapse. Aggressive therapy to achieve maximum local control of the primary tumour is considered to be more important than elective neck treatment.

Elective treatment of the neck whether ELD or irradiation can only be considered justifiable in patients with advanced stage primary carcinomas (T3-4) of the maxillary sinus.
O-101 Incidence and Outcome of Tobacco and Alcohol Consumption in Oral Cancer Patients

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Aim: To determine the incidence and outcome of tobacco and alcohol consumption in the population of patients with oral cancer arriving at G.C.R.I.

Materials And Methods: A total of 335 patients were observed in our O.P.D. over a period of 1 year. These patients were then evaluated for alcohol and tobacco consumption. Their outcomes were then evaluated.

Results: Our study group comprised 285 males and 50 females, of which 68.77% males and 54% females did use tobacco products, additionally 15.78% males and 6% females concurrently consumed tobacco and alcohol simultaneously. Tobacco did not appear to affect the degree of differentiation of the malignancy with 37.31% of non-users and 34.98% of tobacco users showing well differentiated morphology, 58.21% of non-users and 59.64% of users showing moderately differentiated and 4.48% of non-users and 5.38% of users showing poorly differentiated morphology. However consumers of both alcohol and tobacco showed a trend towards well differentiated morphology, with 44.44% well differentiated, 53.33% moderately differentiated and 2.33% poorly differentiated tumors.

Stage wise appearance: non-addicts show a greater tendency towards early lesions at presentation with approximately 50% of cases presenting as t1, t2 or t3 lesions. Those who consume tobacco and alcohol had the worst presentation with only 6.66% cases presenting in early stage.

Outcome/prognosis: A total of 77.61% of non users were operated and approximately 13.46% had local/distant recurrence at 1 year observation. 92.82% of patients who were tobacco users were operable at presentation with 14.97% showing recurrence at 1 year. Those consuming both alcohol and tobacco were associated with a very poor prognosis with 95.35% of patients undergoing palliative care.

Conclusion: Tobacco consumption is seen in a vast majority of oral cancer patients with >80% of males and 60% of females using it. Though it does not affect the differentiation of the tumor to a large degree, it is definitely associated with outcome with a tendency to present at a later stage as well as a slightly increased risk of recurrence. Tobacco usage with alcohol intake is especially associated with a poor outcome with almost 95.35% of patients in our study ending up in palliative care.
O-102 Comparison of Accuracy of Clinico-Radiological Versus Histo-Pathological Staging in Oral Cancer Patients

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Aim:-
To compare the accuracy of preoperative staging of Oral cancer patients in comparison with their histopathological outcome. as well as evaluate the accuracy of CT scan in detection of bony involvement in oral cancer patients.

Materials And Methods:-
a retrospective analysis of 260 patients of oral cancer treated in our institute during 2015 was performed. A comparative study was made to determine the accuracy of pre-operative staging (clinical and radiological). We also compared the accuracy of the conventional C.T. scan in detecting bony involvement (maxilla and mandible) in oral cancer patients.

Results: -
The clinico-radiological staging had an accuracy of 82.6% in detecting T1 lesions, 51.54% in detecting T2 lesions, 41.6% in detecting T3 lesions and 77.5% in detecting T4 lesions compared to the staging obtained by histo-pathology. Accuracy of detecting bony involvement by CT scan was 77.3% with false positive of 7.3% and a false negative of 15.4% as compared to the histo-pathological bony involvement.

Conclusion: -
Clinico-radiological accuracy was seen to be greater in T1 and T4 lesions as compared to T2 and T3 lesions. This could be due to the difficulty in accurately measuring the tumor dimensions, as well as change in the tumor size post resection. CT scan was shown to have a high false negative rate and false positive rate in detection of bony erosion thus indicating the need for careful planning of patients and individualisation of treatment.
O-103 Comparative Study of Nebulisation with Magnesium Sulphate, 3% Sodium Chloride and Ketamine to Reduce Post-Operative Sore Throat Associated with Tracheal Intubation.

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Aims & Objective:-
To compare efficiency of pre-operative nebulization of 3% Normal Saline, Magnesium Sulphate and Ketamine in reducing the incidence of post-operative sore throat.

Methodology:-
A prospective randomized double-blinded study was conducted in 60 cases divided into three equal groups. Patients included in the study were of either gender belonging to American Society of Anaesthesiologist (ASA) status 1 or 2 undergoing elective surgery of approximately 2 h or more duration requiring tracheal intubation. Patients in Group A are nebulized with 3% normal saline, Group B are nebulised with Ketamine 50 mg and the patients in Group C are nebulized with magnesium sulphate 500 mg for 15 min, 5 min before induction of anaesthesia. The incidence of POST at rest and on swallowing and any undue complaints at 0, 2, 4, and 24 h in the postoperative period are evaluated.

Results:- Ketamine, 3% normal saline and magnesium sulphate 500 mg demonstrated a decrease in POST at 0, 2, and 4 hr. There was decrease in the incidence and severity of sore throat in postoperative period.

Conclusion:-
The use of pre-operative magnesium sulphate nebulisation reduced the incidence and severity of sore throat during early post-operative period in patients receiving GA with tracheal intubation as compared to ketamine and 3% normal saline.
Objective: Dermatofibrosarcoma Protuberans (DFSP) is a rare locally aggressive spindle cell soft tissue neoplasm with high rate of local recurrence and rare distant site metastasis. Our study aimed to analyse the pattern of recurrence, best possible surgical treatment and factors preventing its recurrence.

Methods: We studied prospectively 10 patients of recurrent DFSP attending to Gujarat Cancer Research Institute & M.P. Shah Regional Cancer Hospital, Ahmedabad, India from January to December 2015. All patients evaluated clinically, pathologically and radiologically. Thereafter all underwent surgical resection with reconstruction. Based on postoperative histopathology, patients judged for the need of adjuvant treatment. We also analysed oncologic and aesthetic outcome after a minimum follow up period of 12 months.

Results: 8 males and 2 females (M:F=4:1), with average age of 44.8 years (range 16-75), presented with recurrent chest wall DFSP - 06 patients with 1st recurrence; 02 patients with 2nd recurrence; 01 patient with 3rd recurrence and 01 patient was not actually recurrent rather with positive previously excised mass margin. The average duration of recurrence was 14.6 months (range 6-36 months). The average size of the tumour was 58.2cm² (range 5×3-15×12 cm²) located over superior presternal (05 cases), parasternal (03 cases), axilla (01 case) and breast (01 case). 01 patient had lung metastasis since the previous surgery for which he took Imatinib Mesylate defaultly. All 10 patients underwent wide local excision of mass including scars with a minimum margin of 3cm. in all directions. 08 patients reconstructed with local myocutaneous flap. Based on histopathology, 01 patient required postoperative adjuvant radiotherapy. After minimum follow up of 12 months all are oncologically and aesthetically well.

Conclusions: Dermatofibrosarcoma Protuberans is a locally aggressive neoplasm notorious for recurrence. Accurate diagnosis and wide local excision with at least 3 cm. margin with reconstruction at the time of first surgery as well as proper histopathologically directed adjuvant radiotherapy or chemotherapy can prevent recurrence.

Keywords: Dermatofibrosarcoma Protuberans (DFSP), Imatinib Mesylate.
Objective: Pectoralis Major Myocutaneous (PMMC) flap is a very reliable and versatile flap for head and neck oncologic reconstruction. Our study analysed its versatility in chest wall reconstruction after curative resection of soft tissue malignancy.

Methods: We studied 18 cases of anterior chest wall tumours at Gujarat Cancer Research Centre & M. P. Shah Regional Cancer Centre, Ahmedabad, India between January – December 2015 who underwent curative resection followed by single stage PMMC only reconstruction. We analysed our experience with minimum follow up of 1 year and reviewed the literature.

Results: Out of 18 patients, 15 were males and 03 females (M:F=5:1), average age was 39.5 years (range 16-65). The most common pathology was soft tissue sarcoma (72.2%, n=13) – Dermatofibrosarcoma Protuberans (50%, n=9), Fibrosarcoma (11%, n=2), Epitheloid sarcoma (5.5%, n=1) and Ewings sarcoma (5.5%, n=1). The other pathologies were Squamous cell carcinoma (16.6%, n=3), Chondrosarcoma (5.5%, n=1) and Malignant melanoma (5.5%, n=1). Average size of the tumour was 57.11cm² (range 5×5 - 15×12 cm²). The location of the tumour over chest wall were – upper presternal (38%, n=7), parasternal (27.7%, n=5), lateral (27.7%, n=5) and shoulder (5.5%, n=1). Wide local excision with adequate margin in all directions done and thereafter average size of the defect was 106cm² (range 7×7-20×15cm²). All defects were reconstructed by single stage local PMMC only flap. Postoperative complications were minor: Infection and dehiscence (11.1%, n=2), marginal necrosis (5.5%, n=1) without any flap loss. One patient needed skin grafting for wound gap. After 12 months follow up, no recurrence noted and aesthetic outcome were excellent in 33%(n=6), moderate in 38.8%(n=7) and acceptable in 27.7%(n=5).

Conclusions: Pectoralis Major Myocutaneous Flap is an excellent reconstructive technique for oncological chest wall defect. It can cover large size defect at any location over the anterior and lateral chest wall with minimal complication and maximum aesthetic and oncological outcome.

Key-words: Pectoralis Major Myocutaneous (PMMC), Chest wall Tumours.
O-106 Predictive Signs of Difficult Intubation

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Introduction:
The difficult intubation has been defined as ‘The clinical situation in which a conventionally trained anesthesiologist experiences difficulty with face mask ventilation of the upper airway, difficulty with tracheal intubation, or both’.

Methods:
1. Mallampati classification
2. Cormack and Lehane grading
3. Wilson score
4. El-Ganzouri score
5. The three criteria of Bellhouse
6. Direct laryngoscopy and fibreoptic bronchoscopy
7. Indirect laryngoscopy and physical examination

Results:
- Among the paraclinical evaluations, indirect laryngoscopy seems to be the easiest to perform and the easiest to interpret.
- The positive predictive value, sensitivity and specificity of this test are better than those of the Mallampati classification and of the Wilson score.

Conclusions:
- No single airway test can provide a high index of sensitivity and specificity for prediction of difficult airway. Therefore it has to be a combination of multiple tests.
- However that some patients with a difficult airway will remain undetected Thus, anaesthesiologists must always be prepared with a variety of preformulated and practiced plans for airway management in the event of an unanticipated difficult airway.
O-107 Multiple Myeloma Invading Central Nervous System: A Case Report
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Multiple myeloma (MM) is a monoclonal gammopathy known as the malignant proliferation of plasma cells, presenting with typical complications like hypercalcemia, osteolytic bone lesions, anemia, renal insufficiency, and frequent infections. Central Nervous System (CNS) involvement in multiple myeloma, in the form of leptomeningeal myelomatosis or parenchymal involvement is very uncommon and has been reported only in 1% of patients. The mechanism for the spread of plasma cells to CNS remains unclear. Plasma cells may, in a similar fashion to leukemic cells, extend to CNS through microscopic veins in arachnoid membrane. Myeloma cells may also migrate into perivascular spaces and direct extension from bony lesions, or preexisting CNS Plasmacytoma may occur. CSF cytology and MRI Brain in addition to routine myeloma workup is essential for diagnosis. Different modalities of treatment including intrathecal chemotherapy, cranial irradiation, and systemic chemotherapy are used. We present a case of a 40-year-old female patient, with complaints of headache and left eye proptosis, who after complete workup was diagnosed as a denovo case of stage 3 Extra medullary Multiple myeloma with CNS involvement. Patient was treated with Bortezomib and Thalidomide based chemotherapy along with the Whole Brain Radiotherapy (WBRT). Patient responded well to the treatment and is under regular follow-up.

Key-words: Multiple myeloma; Extramedullary; CNS involvement.

O-108 Primary Angiosarcoma of the Breast: A Rare Case Report
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Primary angiosarcoma of the breast is extremely rare, accounting about 0.04% of all primary malignancies of breast. Radiologic findings are often non specific and may appear completely normal in one-third of cases with primary angiosarcoma. While mammograms frequently miss these lesions, ultrasound and MRI shows promise as imaging modalities. In spite characteristic features describe on pathology, misdiagnosis is common, with over 35% tumor initially thought to be benign. The prognosis is usually poor because of the high rates of local recurrence and early development of metastasis. Surgical removal followed by adjuvant chemotherapy seems improve the prognosis. We present the case of a 42
year old woman with a highly vascular mass in her right breast which is suggestive of malignancy at radiology. An ultrasound showed a diffuse and ill defined hyperechogenic infiltration in lower portion of right breast which is hypervascular on Doppler sonography. Mammography showed a non specific and diffuse density area of 12 cm. there was no microcalcification or distortion. Initial core needle biopsy showed a benign haemangioma. The patient underwent a mastectomy. The tumor histology showed papillary formations and vascular structures lined by atypical cells with hyperchromatic nucleus and eosinophilic cytoplasm with solid areas. The tumor cells expressed vimentin, actin CD34 and CD31 but negative for cytokeratin. The diagnosis of angiosarcoma grade III was made. The patient is now receiving chemotherapy. She is still alive.

Key-words: Angiosarcoma; Breast; Mastectomy; Radiation; Chemotherapy

O-109 Carcinoma of Stomach Presenting as Breast Metastasis, Malignant Pleural Effusion and Dermatoses: A Rare Case Report

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Gastric cancer can have protean manifestations, usual symptoms mimicking those of peptic ulcer disease. Gastric adenocarcinomas have rarely been reported with dermatoses as initial presenting features. It is also difficult to diagnose breast metastasis of gastric carcinoma due to its rarity. We report a such case with rare initial presentation. Our case was 24 year old male whose initial complaints were shortness of breath, bilateral breast lumps and skin discoloration on further investigations were found to have primary in stomach. Gastric cancer still remains the second most common cause of cancer mortality in Asia [1]. Carcinomas of the stomach can spread by local extension to involve adjacent structures and can have lymphatic, peritoneal and distant metastases. Because of the vague, nonspecific symptoms that characterize gastric cancer, many patients are diagnosed with advanced-stage disease. Understanding various metastatic manifestations of gastric carcinoma will help in understanding the biology of its various subtypes and guide research in its management. Early recognition with high index of suspicion is needed to ameliorate the symptoms and initiate early appropriate treatment. Upper gastrointestinal endoscopy should be considered as a diagnostic tool in patient of malignant pleural effusion of unknown origin, especially if pleural fluid cytology is suggestive of adenocarcinoma.

Key-Words: Skin discolorations, mammary tumours, pleural effusion, gastric adenocarcinomas
O-110 Anaesthetic Management of a Patient with Prosthetic Mitral Valve for Right Hemiglossectomy with Neck Dissection: A Case Report
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**Background**: Management of patients with prosthetic heart valves, undergoing non-cardiac surgery is always a challenge to Anesthesiologist due to several pre operative, Intraoperative & Postoperative risks. Preoperative optimization of Coagulation status, with Intraoperative monitoring for risk of bleeding, preparation for reversal of anticoagulants if needed and Post operative neurological evaluation for detecting any impairment due to thromboembolism is needed for successful outcome.

**Case**: We present anaesthetic management of 40 years old male, operated case of Mitral valve replacement, posted for (R) Hemiglossectomy + Radical neck dissection.

**Conclusion**: Patients with prosthetic heart valves, when posted for Non cardiac surgeries, they can be best managed by Pre operative optimization of coagulation profile, Intraoperative monitoring for bleeding and thrombosis & restarting the anticoagulants as early as possible in the Post operative period.

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Tumour associated thromboembolism have been high in patients with malignant brain tumour, germ cell tumour and adenocarcinoma. It is associated with surgery, central venous catheter insertion or the use of chemotherapeutic agents such as cisplatin. Also sometimes, a thrombus develops because of tumour embolization, vascular compression by tumour mass or primary tumour metastasis. Thromboprophylaxis should start before operation and continue after operation according to local protocol. Mechanical prophylaxis and pharmacological agents may be used together.

A 20 years old female patient came for emergency laparotomy with ascites, pleural effusion and vitals as follows PR-130/min, BP-100/70mm of HG, RR-30/min. Intraoperatively right sided certofix was inserted since venous access was difficult. Left salphingo oophorectomy with omentectomy was done. Intraop blood loss was 900ml which was replaced with 1 pint of pcv. Patient reversal was uneventful and extubated successfully.

On post operative day 2 patient developed left hand swelling which was diagnosed as complete thrombosis in left subclavian and partial thrombosis in left axillary and brachial vein which was managed with subcutaneous heparin and warfarin successfully.
O-112 Neoadjuvant Imatinib and Limited Resection of the Third Portion of the Duodenum for a Gastrointestinal Stromal Tumor

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Introduction:
The optimal surgical procedure for duodenal GIST remains unclear. Pancreatoduodenectomy, which has been used to treat about 40% of the reported duodenal GISTs, may be an excessive means of treating this disease. On the contrary, pancreas-sparing duodenectomy has only been performed in a few institutions, because the procedure requires precise anatomical knowledge of the pancreatic head.

Methods:
A 64 year old female came to surgical OPD with complain of discharge per vaginum for which she was investigated and found to have an incidentally detected mass in 3rd part of duodenum for which she was asymptomatic. CT scan showed a mass of size 3*2.5cm in relation to 3rd part of duodenum. EUS FNAB confirmed a submucosal mass to be arising from 3rd part of duodenum and the biopsy was confirmed to be a duodenal GIST positive for CD117. The patient was subjected to neoadjuvant Imatinib 400 mg once a day for a period of three months. Repeat evaluation showed significant regression of tumor. Hence, after all preoperative work up, the patient was posted for surgery. Intra-operatively, the mass was found to be arising from anterolateral wall of duodenum and away from major structures and duodenal papilla. Wide local excision of the lesion was done and bowel continuity restored with a side to side duodeno-jejunal anastomosis.

Results:
The patient recovery was uneventful and the histopathology of the specimen confirmed GIST with adequate margins. The patient is on a regular follow-up and asymptomatic at present.

Conclusion:
Duodenal resection is rarely indicated, except in the case of duodenal GISTs and early-stage adenocarcinoma. However, segmental resection of the third portion of the duodenum, preserving the pancreatic head, should be beneficial for patients since it does not involve the excessive resection associated with pancreatoduodenectomy. Preoperative imatinib can be considered in unresectable or borderline resectable cases.
O-113  Papillary Carcinoma Thyroid Mimicking as Carcinoma Larynx – A Case Report

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Background
Though papillary carcinoma of thyroid is quite common, papillary carcinoma infiltrating into larynx is infrequent. (About 5 per 1 thousand cases)

Methods
55 year old male patient presented at GCRI in Head and Neck Services with change in voice, difficulty in swallowing and bilateral cervical nodes. Cervical nodes were large but were not matted and were free from underlying structures and skin. CT scan report was suggestive of mass involving epiglottis, left A-E fold, left PFS, posterior commissure and both arytenoid cartilages with erosion of left lamina of thyroid cartilage. Both lobes of thyroid were enlarged with possibility of malignant infiltration. Multiple cervical nodes were present. Direct laryngoscopy was done. Biopsy from mass was suggestive of osteoclast type stromal response and giant cell tumor. To clear diagnostic dilemma, FNAC from multiple cervical nodes were taken which were suggestive of metastatic papillary carcinoma of thyroid.

Results
Patient underwent total laryngectomy with total thyroidectomy + central node dissection + bilateral level II, III, IV and V nodes dissection. Postoperative period was uneventful except hypocalcemia which was managed by calcium infusion. Histopathology report was suggestive of locally advanced papillary carcinoma of thyroid.

Conclusion
Well differentiated carcinoma thyroid can present with aero-digestive tract infiltration and can mimic other malignancy. FNAC from nodes can help to reach up to diagnosis. T4a lesions of papillary carcinoma thyroid whenever resected completely have good prognosis.
O-114 Multiple Basal Cell Carcinoma Over Face: A Case Report

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Introduction-
Gorlin’s syndrome is also known as basal cell nevus syndrome (BCNS) and nevoid basal carcinoma syndrome. It is a genetically determined disorder, characterized by onset of multiple BCC. Its mode of inheritance is autosomal dominant. It has a variable expressivity but about 60% patients have no family history. Its incidence is increasing worldwide by up to 10% a year. Although mortality is low as basal cell carcinoma rarely metastasises, this malignancy causes considerable morbidity and places a huge burden on healthcare services worldwide. Furthermore, people who have this condition are at high risk of developing further basal cell carcinoma and other malignancies. This article aims to present a concise and comprehensive overview of this important condition, concentrating on recent advances in our understanding of its epidemiology, clinical features, molecular genetics, and treatment.

Case Report-
A 55 year old female patient presented with multiple papulo-nodular lesions over face, scalp and temporal region of 3 years duration. These lesions ranged from 0.3 cm to 1.0 cm in size, were soft, mobile and gradual in progression. Their appearance was variegated with some of them ulcerated. There was no evidence of lymphatic or distant metastasis. One of the lesions just lateral to left eye was incised for taking wedge biopsy and examined histopathologically. Microscopically biopsy showed undifferentiated solid appearance of classical basal cell carcinoma. In one operative sitting 8 lesions were excised under local anaesthesia by taking safe margin of 0.5 cm and closed primarily. In histopathology report all margins were free of tumour. After about 21 days, all operated lesions had healed well.

Summary-
Basal cell carcinoma is the most common malignancy in white people, and its incidence is increasing worldwide. Development of basal cell carcinoma is likely to result from a complex interaction between genes and the environment, especially ultraviolet irradiation; the exact role of exposure to ultraviolet radiation is still to be determined. They also have an increased risk of developing other skin cancers, such as malignant melanoma and squamous cell carcinoma, and possibly non-cutaneous malignancies. Treatment of basal cell carcinoma includes different forms of surgery, radiotherapy, photodynamic therapy, topical fluorouracil, and imiquimod.
O-115 Sweet Syndrome in Acute Myeloid Leukemia: A Case Report and Review of the Literature
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Sweet's Syndrome, Or Acute Febrile Neutrophilic Dermatosis, Is A Rare Skin Disorder Characterized By Painful Cutaneous Nodules And Neutrophilic Infiltrate In The Dermis, Which Is Usually Accompanied By Fever And Other Inflammatory Reactions. Sweet Syndrome May Be Idiopathic, Malignancy-Associated, Or Drug-Induced. Malignancy-Associated Sweet Syndrome Comprises 15–20% Of Sweet Syndrome Cases, In Which Acute Myeloid Leukemia (Aml) Is The Most Commonly Related Malignancy.

We Present The Case of A 9-Year-Old Boy With Acute Myeloid Leukemia. After Induction Chemotherapy The Patient Had Successfully Achieved Remission Of Aml And Was On Consolidation Chemotherapy When He Developed Painful Erythematous Nodules Non Responsive To Antibiotics And Antihistamines. The Lesions Mimicked Chloromas Seen In Aml. However A Skin Biopsy Led To The Diagnosis Of Sweet Syndrome. Our Patient Responded To Systemic Steroids.

Sweet Syndrome Is Very Rare And Mimics Skin And Soft Tissue Infections, It May Precede, Follow Or Appear Concurrently With A Diagnosis Of Malignancy Or May Be An Indicator Of Recurrence. Physicians Should Be Aware Of Sweets Syndrome When The Patient Has Typical Skin Lesions And Keep A High Index Of Suspicion To Search For Underlying Malignancies.

O-116 Neuroendocrine Tumor of Bladder: A Case Report
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Neuroendocrine tumor of the urinary bladder is an extremely rare and highly aggressive tumor with an average five-year survival rate of less than 10% as cited by multiple case reports. It accounts for about 0.5–1% of all bladder tumors. It often presents late and the commonest presentation is haematuria. Cystectomy, partial cystectomy, TURBT with adjuvent radio/chemotherapy, radiotherapy or chemotherapy alone is various treatment options.

We present a case of primary neuroendocrine tumor of urinary bladder in a 57 years old male who presented with complaint of intermittent haematuria. Computed tomography showed a sessile tumoral mass, sized 36x27mm. There was no lymphadenopathy and no metastasis in liver or lungs. Transurethral resection of the tumor mass was performed and tissue fragments were sent to the pathology lab. Histopathological examination shows poorly differentiated carcinoma with invasion to lamina propria and muscle. Immunohistochemical stains showed positive staining of synaptophysin, chromogranin, AE1, CD56, and MIBI 80-90%. Patient was not willing for cystectomy so he was referred to medical oncology department for further management. The patient was submitted to three cycles of carboplatin and etoposide. Follow up computed tomography shows residual mass of size 16x14mm.
A 36 years old male smoker, diagnosed with NHL Anterior Mediastinum (T Cell Lymphoblastic leukaemia) admitted with c/o Left Lower chest wall pain and abdominal pain on and off, breathing difficulty, visual analogue score -8 with breakthrough elements since 15 days, no other complaints or comorbidities. All routine investigations with CT thorax, biopsy and MRI Brain was done. Patient was treated with epidural injection of bupivacaine hydrochloride 0.125% + injection morphine 2 mg for acute pain. Then patient was started on oral morphine, diclofenac and Tryptomer. Dyspnoea was treated with mucolytics, bronchodilators and steroids. Four cycles of IV chemotherapy at 21 days interval were given.

Intrathecal chemotherapy and radiation was given for neoplastic CNS involvement.

Result:
- Pain relief was very good with epidural and then oral morphine.
- Post chemotherapy pain relief was better and morphine doses were reduced and later on stopped.
- After chemotherapy dementia and delirium developed, CNS involvement was positive for Cytomegalovirus.
- Contributors from other medical professions were sought as patient was young and worried about wife and daughter.
- Patient's wife and relatives were educated regarding taking care of his altered behaviour and state of mind.
- Patient was discharged from hospital for improvement of Delirium.

Conclusion:
- The patient was made free from suffering.
- Apart from medical line of treatment, patient’s distress, relatives’ feeling, social and other issues were also addressed.
- Patient was pain free in the last days.
O-118 Orofacial Soft Tissue Reconstruction with Forehead Flap in Recurrent Oral cavity Neoplasms and as a Salvage Flap

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Background:
Reconstruction of orofacial soft tissue defects is often challenging due to functional and aesthetic demands. Despite advances in orofacial soft tissue defect reconstruction using free flaps, locoregional flaps still remain an important option, especially in health resource-depleted environments. This retrospective study highlights our experiences in oral and maxillofacial soft tissue reconstruction using forehead flap which was used in a variety of ways to fill the defects.

Methods:
A three years retrospective analysis of all patients managed in our department by forehead flap was undertaken. Information was sourced from patients' case notes and operating theater records. Data was analyzed using SPSS ver. 16 (SPSS Inc.) and Microsoft Excel 2007 (Microsoft).

Results:
A total of 31 patients underwent orofacial soft tissue defect reconstruction with forehead flap within the years reviewed. The flap was brought externally through the face on cases requiring lip reconstruction or in cases with skin loss. The flap was also put internally by creating a subcutaneous tunnel above the zygomatic arch in cases where buccal mucosa or maxilla had to be reconstructed and the external skin was intact. Males accounted for 20 (64%) cases. When sites of defect were considered, the lip was the most frequent site followed by the buccal mucosa and maxilla. Forehead flap was most commonly used as a salvage flap when there was previous PMMC flap loss and Nasolabial flap could also not be used for reconstruction. It was also useful in those recurrent lesions when no other locoregional flap could be used. Complications noted were flap loss in 15 % cases, tumor recurrences at the recipient bed in 3 (3.9%) cases and postoperative infection in 11 (14.3%) cases.

Conclusions:
Forehead Flap still has an important role in the rehabilitation of patients with orofacial soft tissue defects, especially those with previous flap loss and those with multiple recurrent tumors. It remains a vital tool in the armamentarium of the reconstructive surgeon, especially in health resource-depleted environments where advanced reconstructive techniques may not be feasible.

Key-words: Face; Health resources; Recurrent lesions, flap loss.
O-119 Prognostic Factors in Malignant Parotid Carcinoma Influencing Local and Distant Recurrence

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**Objectives** - To assess the prognostic factors in malignant parotid carcinoma influencing local and distant recurrence.

**Methods** - The present study is a prospective observational study comprised of 42 patients of operable parotid carcinoma treated at our institute, from 2005 to 2010. All patients were already undergone parotidectomy ± neck dissection followed by radiotherapy in some patients based on final histopathological report.

**Results** - Out of 42 patients, 28 were male and 14 were female. Mean age was 50 years. Mucoepidermoid carcinoma was the most common pathology, present in 30 (71%) patients. Twelve patients showed recurrences, (8 local recurrence, 2 local + distant and only 2 distant recurrence). Out of these 12 patients 9 patients showed high grade, 8 patients were T4 and 6 patients presented with facial nerve palsy.

**Conclusion** - Presence of high clinical stage, facial nerve palsy at presentation, high tumor grade are poor prognostic factors in malignant parotid carcinoma.

**Limitation** - Small sample size. A prospective multicentric study with a large sample size is needed for better understanding and conclusion.

O-120 Autoimmune Hemolytic Anemia in Elderly Female with Primary Sjogren's Syndrome.

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Primary Sjogren's syndrome is an autoimmune disease wherein there is lymphocytic infiltration of salivary and lacrimal glands. This inflammation is thought to be caused by B-lymphocytes. The most common clinical feature of Sjogren's is dryness of the mouth and eyes. The hematological abnormalities usually seen in Sjögren's syndrome are lymphopenia, leucopenia, and thrombocytopenia. Very few case reports are available regarding presentation of Sjögren's syndrome in elderly female as a hemolytic anemia. A cohort study involving large number of patients with Sjögren's syndrome done by Ramos-
Casals M et al. has concluded that hemolytic anemia is a very rare hematological presentation of Sjogren's syndrome. Here, we report an elderly female patient who presented with AIHA and found to have primary Sjögren's syndrome.

We had a 66 years old female presented with history of dyspnea on moderate exertion and easily fatigability for 20 days. She did not have any significant medical illness in past. On admission her vitals were normal. Her peripheral blood smear was suggestive of macrocytic normocytic anemia with hemoglobin of 3.4, mean corpuscular volume 126, with total count of 16000 and normal platelet with no parasite. Dengue NS1 antigen, igG ig M were negative. Her LDH was twice the upper limit, with reticulocyte count more than 2.5. Her liver function tests were suggestive of altered albumin globulin ratio. Her creatinine, potassium, arterial blood gas analysis and thyroid stimulating hormone was normal. Serum protein electrophoresis was negative for monoclonal gammopathy. To rule out infection as an etiology of hemolysis procalcitonin was done which was with in normal range. Blood and urine culture didn’t isolate any organism. For further work of anemia direct cooms test and indirect cooms test were sent which were positive. HIV, HBsAG, HCV were negative.USG (A+B) was normal. Her ANA profile by IB was suggestive of strong positivity for SS-A /RO 60 and SS-B/RO52. Bone marrow biopsy was planned for ruling out malignancy but patient was not ready for same.

She was transfused with PCV. For further diagnosis of Sjögren’s syndrome Schirmer test was done which was negative. Patient was referred to rheumatologist for further treatment.

**O-121 Post Operative Management of Diabetes Ketoacidosis in Head and Neck Surgery**

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Diabetes increases the postoperative morbidity and mortality. Optimum postoperative observation and management is essential to optimise the best outcome. Stress, hyperglycaemia in response to surgery osmotic diuretics hypoinsulinemia can lead to life threatening complication like ketoacidosis or hyperglycaemic hyperosmolar syndrome. Wound healing is impaired by hyperglycaemia and chance of postoperative wound infection and septicaemia are more in diabetics. Mortality and morbidity is associated with increase hospital stay in patients with ketoacidosis. In this case we present management of post operative developed diabetes ketoacidosis in known case of Type-II diabetes mellitus. Crucial management was done with injection insulin, fluid, electrolytes supplementation and mechanical ventilation.
Introduction:
The reconstruction of maxillomandibular defects secondary to oral cancer surgery, represent a great challenge for Maxillofacial surgeons. During the last decades the reconstructive surgery has experienced a big advancement due to the development of the microsurgical techniques. Fibula, iliac crest and scapula free flaps have been the three classic options for the maxillomandibular reconstruction owing to the amount of bone that this flaps provide, allowing the posterior dental rehabilitation with implants.

Aim & Objective: Today, It is not only the aesthetic reconstruction, but also the functional reconstruction of the patients that is important, thereby enhancing their quality of life.

Discussion:
Guided implant surgery in free flap reconstructed patients has become an essential tool, helping to define the exact position of the dental implant in the flap. In this way it is possible to look for the areas with better bone conditions, avoiding the osteosynthesis material used to fixate the flap with the native bone and deciding the best biomechanical option, in terms of number and situation of the implants, for the future dental prostheses.

Conclusion:
Using the guided implant surgery, it is possible to design an exact and predictable dental implant rehabilitation in patients with oral cancer who are reconstructed with free microvascular flap, resulting in an optimal aesthetic and functional result.
O-123 Importance of Sentinel Lymph Node Biopsy in Oral and Peri-Oral Malignancies- A Literature Review

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In general, sentinel node navigation surgery (SNNS) aiming at limiting/omitting lymph node dissection has attracted attention as minimally invasive function-preserving surgery. The sentinel node (SN) is a lymph node directly receiving lymph flow from primary tumor lesion and where lymph node micro metastasis first develops. Therefore, if lymph node metastasis is absent in the SN, it is highly likely that cancer has not yet metastasized to any other lymph nodes. Pathological or molecular biological diagnosis of metastasis to the SN allows economical and time efficient diagnosis of lymph node micro metastasis. SNNS aims to limit or omit lymph node dissection in individual patients using SN mapping and the presence/absence of metastasis confirmed by SN biopsy as a parameter, and also to minimize the resection range.

For malignant melanoma breast cancer, the validity and clinical usefulness of the SN concept have already been confirmed and individualized limited surgery based on diagnosis of SN metastasis is presently performed. The problems in the head and neck area are threefold: first, there is a high density of lymph nodes, second, the structure of these nodes shows an unique complexity of lymphatic pathways, and third, the SLNs are located in close proximity to the primary tumor. Therefore, sophisticated lymphatic mapping techniques are required. During the preoperative setting, a dynamic lymphoscintigraphy (LS) assesses the individual draining pattern after injection of radio labeled particles around the primary tumor. The intra-operative use of a handheld gamma probe helps the surgeon to localize and excise the first echelon lymph nodes. The success of this technique has been abundantly reported in the literature and well documented guidelines do exist.

SLNB is an emerging alternative technique for staging the neck. It can identify indeed patients who may theoretically benefit from complete lymph node dissection. Although the validity and reliability of this technique has been confirmed in breast cancer and cutaneous melanoma, it is still in its infancy in SCC.
Introduction:
Solid pseudopapillary neoplasm of pancreas (SPEN) is a rare entity; therefore proper diagnosis, evaluation and formulation of treatment protocols is difficult. It occurs predominantly in the young female. The pathological feature of SPEN are well characterized. Despite its low malignant potential, approximately 15% of patients with SPEN develop metastatic disease, mostly involving the liver or peritoneum. As SPENs are rare, they are often associated with diagnostic and therapeutic challenges.

Materials & Methods:
A total of 41 cases were diagnosed and treated at our institute over a 10-year period (2005–2015). A retrospective study of all these cases was performed with respect to age group most frequently affected, sex ratio, common presenting symptoms and signs, investigative protocols, pathological features, treatment offered, outcome and prognosis. 39 patients were females and 2 were male, with a median age of 20 years (range 13-45 years)

Results & Analysis:
The commonest presenting symptom was painless abdominal mass. All these patients underwent surgical treatment. The average length of postoperative hospital stay was 11 days. There was no postoperative morbidity and mortality. All these patients were disease-free on follow-up.

Discussion:
A high index of clinical suspicion is necessary to suspect and diagnose SPEN. This diagnosis should be borne in mind when young female patients present with a pancreatic mass. CT scan and EUS are valuable pointers to the pre-operative diagnosis. FNAC appears to be of value in the specific diagnosis of SPEN. Surgical excision offers the best chance for cure and should always be attempted irrespective of the magnitude of resection involved. Patients with SPEN have an excellent prognosis.
O-125 Assessment of Post Operative Quality of Life in Patient with Mandibular Resection Followed by Free Fibular Flap Reconstruction in Oral Cancer

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Aim:
Assessment Of Post Operative Quality Of Life In Patient With Mandibular Resection Followed by Free Fibular Flap Reconstruction in Oral Cancer.

Material and methods:
A questionnaire survey was performed by Gujarat cancer research institute Ahmedabad and Department of oral and Maxillofacial Surgery, K M Shah Dental College Piparia. The patients who were treated for oral cancer with segmental mandibular resection followed by reconstruction with vascularised Free Fibular Flaps were included in the study. Patients' Quality Of Life was measured 3 months after surgery.

Results:
Total 41 patients participated in present study, comprising 28 are males and 13 female with a mean age of 39 years. All patients underwent post-operative radiation as per the Multidisciplinary team decisions. After the completion of treatment for the primary disease patients, showed satisfactory levels of quality of life parameters with good functions results and showed that Free fibular flap reconstructive methods has successful outcome and beneficial in the treatment of early oral cancers involving the mandible and floor of mouth. Statistical analysis showed significant good quality of life after reconstruction of mandible by using free fibular flap.

Conclusion:
Head and Neck surgeons must consider of all the options available for reconstruction of surgical defects for good quality of life and functions. In our survey the quality of life and functions are satisfactory with Free Fibular Flap reconstructive methods and should be considered as part of their treatment.
O-126 Role of Antioxidant in Prevention of Oral Potentially Malignant Disorders – A Review Study
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Oral Potentially Malignant Disorder (OPMD)" was defined by WHO in 2005 as the risk of Malignancy being present in a lesion or condition either during the time of initial diagnosis or at a future date. Oral Potentially Malignant Disorders (OPMDs) are mainly associated with the practice of chewing Gutka, tobacco and betel quid and its commercially available products. Potentially malignant disorders of oral cavity consist of group of diseases, which should be diagnosed in the early stage. Oral leukoplaikia, Oral Submucous Fibrosis, and Oral Erythroplakia are the most common oral mucosal diseases that have a very high malignant transformation rate. Other than this Smokers Palate, Discoid Lupus Erythmatosus, Oral Lichen Planus are also categorized under OPMDs. The pathogenesis is difficult to understand, and till date, no definitive therapy is available for the management of OPMDs. Hence, this preliminary study gives review on efficacy of Antioxidant in Oral Potentially Malignant Disorders. Aloevera, Curcumin, red tomatoes, turmeric etc are rich source of Antioxidants Proven to be relatively safe, easily available, economical, noninvasive, and efficacious in the treatment for OPMDs.

O-127 Chondrosarcoma with Malignant Ascites: A Rare Case Report
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Chondrosarcoma is the second most common primary bone tumor that accounts for 20% of all bone sarcomas. The clinical course of chondrosarcoma ranges from slow growing tumor with good prognosis to aggressive behavior with dismal prognosis which depends upon grade of tumor. We present a case of grade II/III chondrosarcoma of the left distal end of femur treated with wide local excision and TKR who later presented to medical oncology department with abdominal distension.  This on investigation turned out as malignant ascites consistent with chondrosarcoma as histology on cytology and cytoblock examination supported with IHC studies. Metastasis from chondrosarcoma commonly occurs in lung in recurrent setting, however isolated malignant ascites as the initial presentation of recurrent chondrosarcoma is rare and has never been reported in literature. So we here present this first case report in literature to make aware of this rare possible metastatic site of high grade chondrosarcoma as well as rare initial presentation of recurrent disease. Patient's presenting complaints, physical examination, radiographic and histological findings, and treatment course are discussed.

KEYWORDS: Chondrosarcoma; bone tumor; malignant ascites.
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