Healthy Heart

Volume-4 | Issue-44 | July 5, 2013

Price : ₹ 5/-

From the desk of Honorary Editor:

We, at Care Institute of Medical Sciences (CIMS), are passionate to improve Human health by imparting a healing touch through quality care and latest technologies in world of health care. We have a vision of creating a virtually Amputation free world, and our mission is to provide the finest quality of life to the patients by salvaging their limbs and extending their lives. We are proud to launch a Comprehensive Endovascular Department at CIMS Hospital with a team of endovascular specialists, surgeons, and interventional specialists, physio therapist , dietary department, diabetic foot care, first of it's kind in our part of the world in a single group of doctors.

Working together as a unified, patient centered team, our health care professionals specialize in minimally invasive endovascular surgery to repair peripheral vascular disease (PVD) a condition wherein the arteries that carry blood to the arm, legs, brain, kidneys, carotids or in fact any part of the body become narrowed or dilated, or even disturbances in veins including varicose veins, obstruction , fistulas etc., In this era, we are witnessing the upsurge of Heart Diseases, Diabetes and other concomitant clinical conditions by which the quality of life and abilities to function get compromised. Through CIMS Healthy Heart , we aim to make people aware of Peripheral Vascular Disease (PVD).

Due to various risk factors, PVD is highly prevalent the world over including India. As PVD affects various parts of human body it can cause stroke, pulmonary embolism, amputation, heart attack and death. This issue emphasizes various available treatment options for endovascular diseases.

CIMS Interventional Vascular Team have the expertise and experience in diagnosing and treating common, complex and rare vascular diseases to diagnose and treat any vascular condition. Feel free to call any of us listed below for your vascular patients.

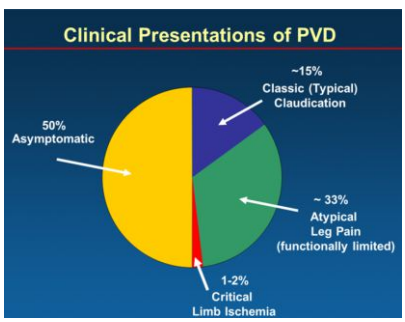
- Dr. Keyur Parikh

CIMS Care for the Circulatory System

What is Peripheral Vascular Disease (PVD)?

PVD is the narrowing of the arteries (Blood vessels) in the legs, arms, kidneys, brain, stomach, etc. Arteries become narrowed (or blocked) and hardened because of fatty deposits - plaque formation. This plaque buildup is called atherosclerosis. Due to this, blood flow to the organs is reduced, which is known as poor circulation. It causes pain and variety of symptoms according to the anatomical part of the body due to insufficient supply of oxygen (ischemia).

PVD is a serious disease that affects millions of people over the age of 50 years . But most of the patients are not aware of having PVD and thus don't get treatment. So it is very important to understand the signs and symptoms of PVD.



Cardiologists			
Dr. Ajay Naik	(M) +91-98250 82666	Dr. Milan Chag	(M) +91-98240 22107
Dr. Satya Gupta	(M) +91-99250 45780	Dr. Urmil Shah	(M) +91-98250 66939
Dr. Vineet Sankhla	(M) +91-99250 15056	Dr. Hemang Baxi	(M) +91-98250 30111
Dr. Gunvant Patel	(M) +91-98240 61266	Dr. Anish Chandarana	(M) +91-98250 96922
Dr. Keyur Parikh	(M) +91-98250 26999		

Pediatric Cardiologists			
Dr. Kashyap Sheth	(M) +91-99246 12288	Dr. Milan Chag	(M) +91-98240 22107

Cardiothoracic & Vascular Surgeons	
Dr. Dhiren Shah	(M) +91-98255 75933
Dr. Dhaval Naik	(M) +91-90991 11133
Dr. Dipesh Shah	(M) +91-90990 27945

Pediatric & Structural Heart Surgeons	
Dr. Shaunak Shah	(M) +91-98250 44502

Vascular & Endovascular Surgeon	
Dr. Srujal Shah	(M) +91-91377 88088

Cardiac Anaesthetists	
Dr. Niren Bhavsar	(M) +91-98795 71917
Dr. Hiren Dholakia	(M) +91-95863 75818
Dr. Chintan Sheth	(M) +91-91732 04454

Neonatologist and Pediatric Intensivist	
Dr. Amit Chitaliya	(M) +91-90999 87400

Cardiac Electrophysiologist	
Dr. Ajay Naik	(M) +91-98250 82666

The good news is that like other diseases related to the arteries, PVD can be treated with lifestyle changes, medicines or by undergoing intervention/surgery, if needed. And one can live well with PVD.

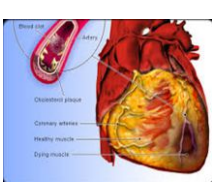
RISK FACTORS OF PVD

An individual is at risk for developing PVD when one or more of following risk factors are present:

- Age (> 50 yrs)
- Smoking or use of Tobacco (Gutka)
- High Cholesterol
- Diabetes
- Hypertension (high blood pressure)
- High levels of Homocysteine
- Family History of PVD
- CABG (Suggested or undergone)
- History of a heart disease, heart attack or a stroke
- Obesity
- Sedentary life style (No physical workout)

PVD & YOUR HEART

The hardened arteries found in people with PVD are a sign that they are likely to have hardened and narrowed arteries to the heart and brain. That is why people with PVD have two to six times greater chance of death from a heart attack or a stroke.



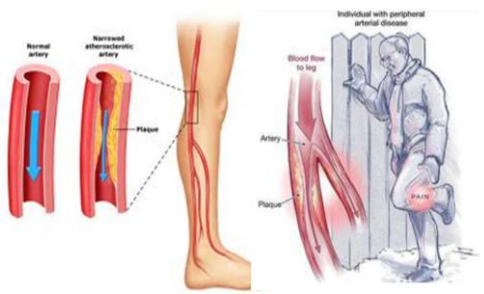
PVD & DIABETES

- Peripheral Vascular Disease is FIVE TIMES more common in patients with Diabetes.
- 30% of Diabetics will have PVD.
- There is an amputation happening every thirty second throughout the world due to PVD.

- Major limb amputation rate is FOUR TIMES HIGHER in Diabetics with PVD than those having PVD alone.
- Loss of function to a great extent is associated with the diabetic foot and major amputations result in 50% deaths at 5 years amongst diabetics.

PVD & YOUR LIMBS (LEGS & ARMS)

When the blood flow to the legs is greatly reduced, people with PVD have pain while walking. This pain may come and go but never goes away. PVD can seriously impair a person's ability to walk. If not treated, PVD may lead to Critical limb ischemia, Gengrene and amputation of a toe, foot or a leg. Any type of leg pain should not be neglected as it could be a serious sign of PVD.



SYMPTOMS OF PVD IN LIMBS

- Pain in buttocks, thighs or calf while walking only. No pain when resting (intermittent Claudication)
- Leg pain at resting
- Numbness (Needle pricking pain) in legs
- Cold feet
- Nagging pain in legs
- Rash, marks or ulcers on feet or legs
- Discoloration of toes (Pale, Blue or Black)

DIAGNOSIS OF PVD

Physical examination

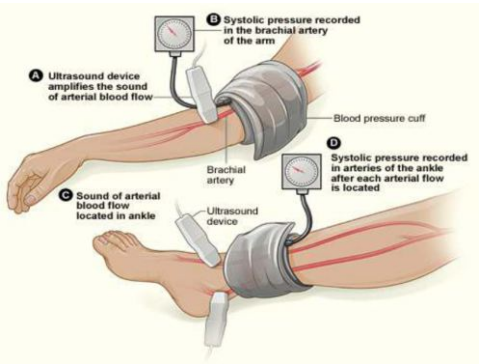
- First of all a medical history will be taken followed by a thorough physical examination.
- The feet is checked to see if they are drained of color when they are raised or reddened in color when they are lowered.
- It will also be noted if there are any signs of sores that are slow on healing.
- It will be checked if there is a weak pulse in the legs and measure the temperature of the lower leg or foot.

Diagnostic tests

ABI (Ankle-Brachial Index) Blood pressure measurement

- The Ankle–Brachial Index is a painless examination that compares the blood pressure in the feet to the blood pressure in the arms and

determines how well the blood is circulating.



Doppler Ultrasound (Duplex) imaging

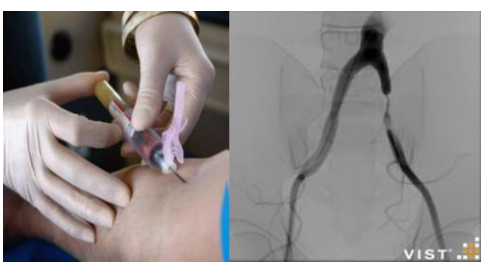
- This method uses sound waves to look at the arteries and measure the blood flow.

Blood tests

- A set of routine blood test will be arranged to screen for any associated conditions that one may have such as high cholesterol levels or diabetes.

Angiography

- More specialized tests, such as angiography may be referred. This is an X-ray picture of the blood vessels which is obtained by putting a dye (contrast agent) into the arteries that shows up on X-ray. The dye is injected through a small tube



(catheter) that is inserted through the arm or groin into one of the blood vessels. This will give a more detailed picture of the location and size of any narrowing of the arteries. Angiography in Catheterisation Laboratory or by CT Scan Angiography can be done as an out patient.

TREATMENT OF PVD

Modifying Risk Factors – Quit smoking, increasing exercise and maintaining a healthy weight & life style to keep cholesterol levels, blood pressure and diabetes in control.

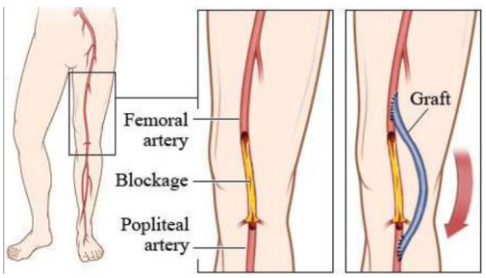
Medication

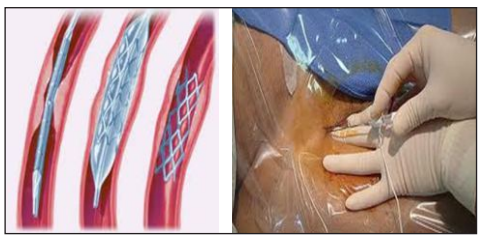
- Medication may be prescribed to treat lower limb PVD that will help improve walking a distance and prevent blood clots and help in lowering cholesterol.

- If changing lifestyle and medication is not enough to treat PVD, then the treatment option may include surgery and non-surgical treatments. Most people with PVD do not need surgery. Only a doctor can determine the right treatment.

Vascular surgery

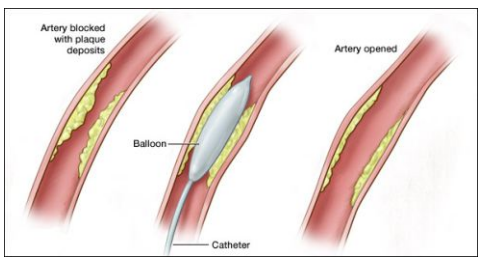
- In the past, surgery was the only procedure available to treat severe PVD, and in some cases, reconstructive surgery may still be needed. When surgery is required, the surgeon implants a new vessel (a natural or artificial vascular bypass) that allows the blood to bypass the obstruction. This is an invasive procedure.





Balloon angioplasty

Angioplasty is a less invasive, non-surgical procedure that can be used to dilate (widen) narrowed or obstructed peripheral arteries. A specially trained doctor inflates a tiny medical balloon



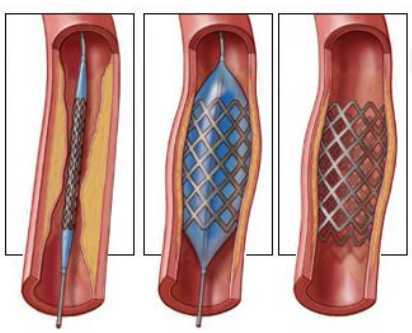
inside the artery, compressing the plaque against the blood vessel walls. The balloon is then deflated and is withdrawn. This procedure is performed entirely within the artery through a small puncture in the groin.

Stent Implatation

- An angioplasty may be recommended together with the placement of an intravascular stent in the artery. An intravascular stent is a fine wire mesh tube that is introduced into the artery with the help of a catheter. The stent is then gently expanded to open the vessel, restore blood flow, and relieve

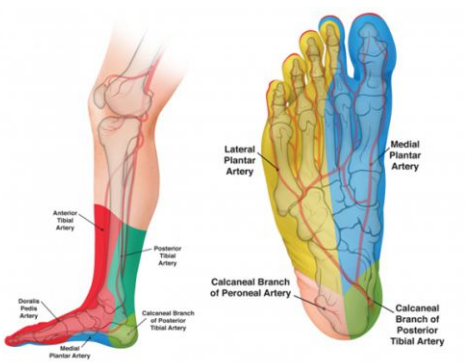
symptoms. The stent will slowly become part of the artery. The lining of the artery will slowly grow over the stent, permanently incorporating it into the artery wall.

- Stent implantation is performed in a hospital equipped with X-ray imaging (Angiography Room) to enable the doctor to see where to place the stent in the artery.
- Following a stent procedure, in most cases the patient can leave the same day or the day after the procedure, as it is not an invasive treatment like surgery that requires longer recovery.



PVD & YOUR FEET

Our feet are being supplied the blood flow mainly by arteries called Anterior Tibial Artery, Posterior Tibial Artery and Peroneal Artery. These arteries are arising from a trifurcation below the knee. This trifurcation is just below the popliteal artery. That's why these



arteries are termed as infrapopliteal arteries or BTK (Below The Knee) arteries.

BTK arteries are very thin as compared to other arteries in the lower limb due to fatty deposit – Plaque buildup (Atherosclerosis)

AORTIC ANEURYSM

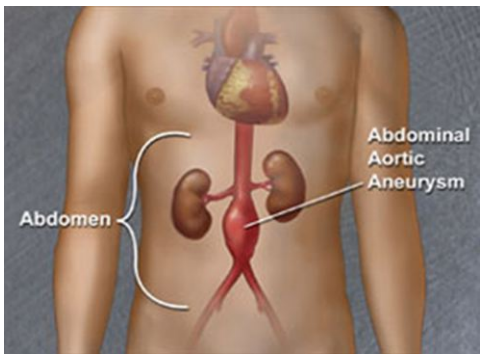
Aortic Aneurysms are the third leading cause of sudden death in elderly people. The fact about this disease of aortic aneurysm is lack of awareness amongst the patients. The symptoms of the disease are not well understood by the patients and thus mislead them. Many often this disease leads to emergencies as it is not timely diagnosed and detected, most of the time patients lose their lives before reaching hospital and getting treatment for it. That's why it is very important to know and understand the symptoms and treatment of Aneurysmal disease for an early diagnosis.

What is an Aneurysm?

An aneurysm is defined as a permanent, focal dilatation of an artery that exceeds 1.5 times of the normal expected diameter. An aneurysm is most commonly a result of atherosclerosis. Due to various risk factors, the wall of an artery weakens and loses its elasticity and develops a localized ballooning which has got high chance of rupture due to the force of blood flow.

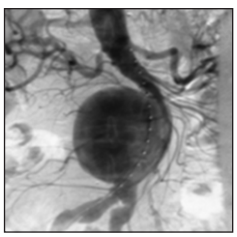
ABDOMINAL AORTIC ANEURYSM (AAA)

When Aneurysm affects the Abdominal Aorta it is called Abdominal Aortic Aneurysm (AAA). Due to large diameter, high pressure zone and high force of blood in the Aorta the chances of rupture for AAA are likely to be high, which are life threatening. If an AAA rupture occurs, overall mortality is 75-90%.

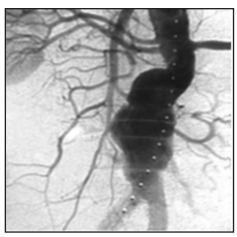


Classifications of AAA

Abdominal aortic aneurysms are classified primarily according to their shapes. The AAA concentric (All round the aortic wall) are called Fusiform and AAA acentric (one side of aortic wall) are called Saccular.



Fusiform



Saccular

The other way AAA are classified is how far they extend proximally. More than 95% of all abdominal aortic aneurysms are infrarenal. These aneurysms start below the orifices of the renal arteries

and usually have a 1.2 – 2 cm segment of normal infrarenal aorta. Others are Juxtarenal (extend to the level of the renal arteries) and those classified as Suprarenal (extend proximally to the level of the superior mesenteric and/or celiac arteries).

Causes and risk factors of AAA

- Age: > 60 years (individuals over 60 years are most likely to develop the condition)
- Gender: M > F (4:1 - Males are more prone to the condition than Females)
- History of atherosclerosis (hardening of the arteries)
- Family history (1° male relatives): 20%
- Smoking: Current or past smoker
- Peripheral aneurysms femoral, popliteal, thoracic
- Hypertension (High Blood Pressure)
- Diabetes
- Chronic Lung Disease

Clinical Presentation (Symptoms) of AAA

Most people feel no symptoms, and an AAA is often detected when tests are conducted for other unrelated reasons. Those with symptoms describe them as:

- A pulsing feeling in their abdomen
- Unexplained, severe pain in their abdomen or lower back
- Pain, discoloration, or sores on their feet (this is a rare symptom)

Most aneurysms are detected not during physical examinations, but rather during abdominal pelvic imaging studies such as ultrasonography and CT performed for other indications e.g. chronic back pain, renal cysts.

Diagnosis of AAA

Ultrasound

Abdominal ultrasound is a safe, simple and inexpensive means of detecting abdominal aortic aneurysms. It does not require the use of ionizing radiation, intravenous contrast or arterial cannulation.

Computed Tomography (CT)

CT is the current "gold standard" for imaging patients with abdominal aortic aneurysms. The technique is more expensive than ultrasound and potentially harmful because of the use of ionizing radiation and intravenous contrast.

Catheter-based or Invasive Arteriography

Catheter-based or invasive arteriography is frequently performed before abdominal aortic aneurysm repair although it should not be viewed as a diagnostic test. Arteriography simply visualizes the lumen of vessels (i.e. aorta, iliac and femoral arteries).

Treatment of AAA

Looking into various parameters, either EVAR (Endovascular Repair) or the surgical (Open Repair) procedure is opted for.

Open Surgical Repair:

Open surgical repair has been in practice since the 1950's with a great deal of success. However, some patients are not suitable candidates for invasive surgery due to age and common chronic co-morbidities that greatly increase their risks.

Open –Surgical Repair of AAA

Endovascular Repair (EVAR):

EVAR is less invasive than open surgical repair and is appropriate for well over half of patients with AAA, allowing for AAA Repair in patients that are otherwise inoperable. Through a

EVAR of AAA

catheter-based system, EVAR utilizes small incisions in the femoral artery in the groin to deliver a self-expanding graft into the abdominal aorta. Benefits of the EVAR treatment include low incidence of complications, a very low morbidity rate, less loss of blood during the procedure, shorter hospital stays and shorter recovery times.

To be continued...

Courtesy

Dr. Keyur Parikh
MD (USA) FCSI (India) FACC, FESC, FSCAI
Interventional Angiologist
Interventional Cardiologist

Dr. Hemang Baxi
MD, DM (Cardiology)
Interventional Cardiologist

Dr. Srujal Shah
MS, MCh
Consultant Vascular & Endovascular Surgeon

Below the Knee Intervention for CLI in Diabetics

Case Presentation: A 65 year old gentleman having persistent left foot rest pain and a chronic non healing ulcer was evaluated at CIMS hospital.

Diagnosis and Management: Angiography showed multiple calcified stenotic lesions in proximal ATA, distal PTA and a short segment occlusion in distal ATA. Ante grade left femoral puncture was done. Lesions crossed with dedicated CTO wire Vin 18 and lesions were treated using 2 x100 mm tibial balloons with prolonged inflation time of 1 minute at 14 atm pressure. ATA lesions were also treated and planter arch circulation was completed.

Fig.1 Angiography

Fig.2 Posterior Tibial Artery (PTA) Angioplasty

Fig.3 Anterior Tibial Artery (ATA) Angioplasty

Outcome: Post procedure patient was kept on high dose lipid lowering medicines and dual antiplatelet therapy. Pain at rest was relieved and ulcer healed over 2 week's periods. Follow up are required.

Successful Management of the Most Challenging Venous Ulcers at CIMS Vein Clinic

Case Presentation: We present a case of grade 6 venous disease in a 50 year old male having non healing ulcer over gaiters area. Despite consulting almost 30 doctors, wound remained unhealed.

Diagnosis and Management: Patient was evaluated and found to have leg perforator incompetency on venous Doppler. USG guided micro foam sclero therapy was performed and compression stockings were given. The ulcer healed within 1 month span with excellent patient satisfaction.

At CIMS vascular surgery division, we have the latest RF ablation device and micro foam therapy technique. We have treated the most complex venous ulcers with a 100% success rate.

Outcome: The challenging venous ulcer was managed successfully.

Fig.1 Before Sclerotherapy

Fig.2 One Month after Sclerotherapy

10th

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- Introduction Session
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- Hypertension / Lipids & Cardiovascular Risk Management
- Medical Devices in Cardiology / Interventional Cardiology
- Debates
- Special Topics

Satellite Sessions

(Time : 8.00 pm - 10.00 pm)

- Pharmacology & Therapeutics - 1 & 2
- Cardiology Guidelines
- Peripheral/ Endovascular /Diabetic Foot
- Stroke

TRACKS - DAY-2 (January 11, 2014)

CARDIOLOGY TRACK

- Interactive ECGs/Arrhythmia
- Atrial Fibrillation/ Arrhythmia
- Plenary Lectures
- CIMSRE-Oration
- Structural / Congenital Heart Disease
- Heart Failure
- Live Case Session

CARDIOVASCULAR THORACIC SURGERY (CVTS) TRACK

NEONATAL & PEDIATRIC CRITICAL CARE TRACK

CRITICAL CARE & PULMONARY TRACK

TOTAL KNEE REPLACEMENT (TKR) TRACK

TRACKS - DAY-3 (January 12, 2014)

CLINICAL CARDIOLOGY TRACK

CARDIOVASCULAR THORACIC SURGERY (CVTS) TRACK

NEONATAL & PEDIATRIC CRITICAL CARE TRACK

CRITICAL CARE & PULMONARY TRACK

TOTAL KNEE REPLACEMENT (TKR) TRACK

INTERNAL MEDICINE TRACK

TRAUMA CARE TRACK

Registration Information

Cheque or DD's to be made A/C payee and in the name of **'CIMS Hospital Pvt. Ltd.'** Kindly mail the registration form along with the cheque/DD to our office. All Cash Payments are to be made at 'CIMS Hospital, Ahmedabad' only.

Module	Before 31-10-2013	Before 31-12-2013	Spot Registration (After 31-12-2013)
Main Conference (January 10-12, 2014) (including certification course)	₹ 6000	₹ 7000	₹ 9000
Certification Courses (January 11-12, 2014)	₹ 2500	₹ 3500	₹ 4000
** Deposit for Hotel Accommodation (Separate cheque)	₹ 3500	₹ 3500	₹ 3500
For students doing MD (Medicine) with proof	₹ 3000	₹ 3500	₹ 4000
Spouse Hotel Registration (Non- refundable)	₹ 3500	₹ 3500	₹ 3500
In case of cancellation	25 %	50 %	100 %

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Due to an unprecedented response and over booking, registration fees for MD - Physician will be refunded if registered before August 31, 2013.

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