

# Healthy Heart

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## Honorary Editor :

Dr. Ajay Naik



### From the desk of Honorary Editor:

*Electrophysiology is an advanced sub-speciality of cardiology dealing with management of electrical problems of the heart. This entails cardiac brady and tachyarrhythmias, Heart failure and arrhythmias in patients with structural heart disease.*

*Electrophysiology Study and Radiofrequency Ablation is unique in the field of medicine as it is "curative", the patient does not require any medication following the procedure for the disease treated.*

*A decade ago, we initiated & established EP services in Ahmedabad. Over the past decade, the faith shown by all of you has help benefit thousands of patients from Gujarat and neighboring states. This is a short review of the experience.*

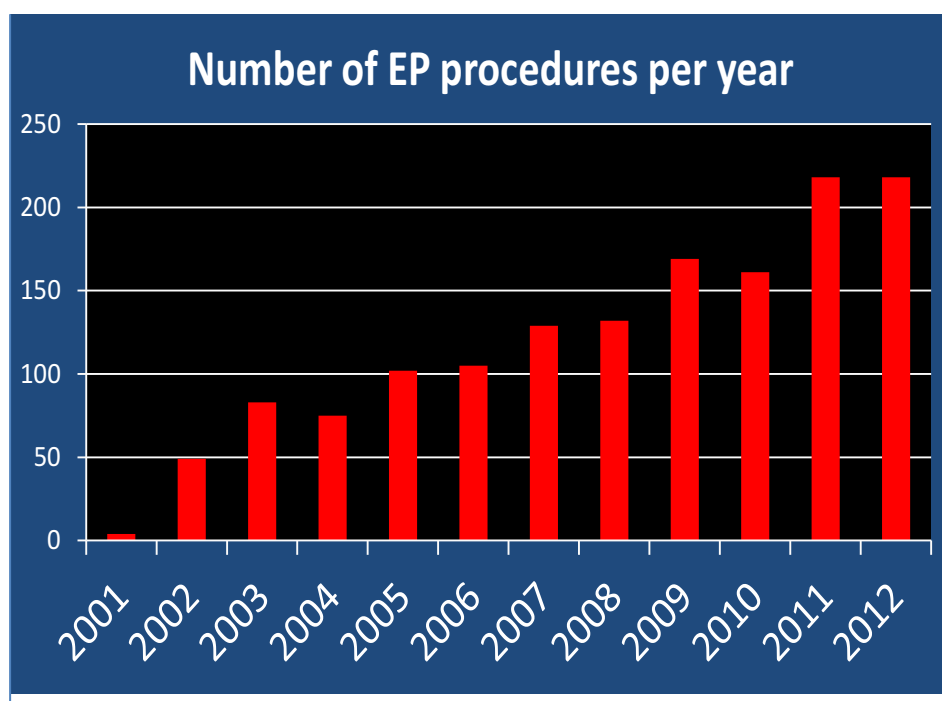
**- Dr. Ajay Naik**

## A decade's experience of ablation and arrhythmia management

Electrophysiology study (EPS) is a procedure performed for the diagnosis of cardiac arrhythmias and Radiofrequency Ablation (RFA) is performed to treat tachyarrhythmias. A number of cardiac arrhythmias can be treated by EPS and RFA :

1. Atrial tachycardia (AT) / Atrial flutter (AFL) / Atrial fibrillation (AF).
2. Supraventricular Tachycardia (SVT)
3. Wolff-Parkinson-White (WPW) Syndrome
4. Ventricular Tachycardia (VT).

### Electrophysiology (EP) procedures over 10 years (Oct 2001 - Dec 2012):



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	Total pts	EP diag	EPRFA	SVT	Success	VT	Success
2001	4	1	3	2	2	1	1
2002	49	16	33	30	28	3	3
2003	83	15	68	64	60	4	3
2004	75	12	63	60	57	3	3
2005	102	19	93	89	85	4	2
2006	105	9	96	92	88	4	3
2007	129	14	105	103	99	2	2
2008	132	25	107	104	100	3	2
2009	169	45	124	116	112	8	6
2010	161	34	127	113	110	14	12
2011	218	22	196	176	173	20	18
2012	218	41	177	168	165	9	8
<b>Total</b>	<b>1445</b>	<b>253</b>	<b>1192</b>	<b>1117</b>	<b>1079</b>	<b>75</b>	<b>63</b>

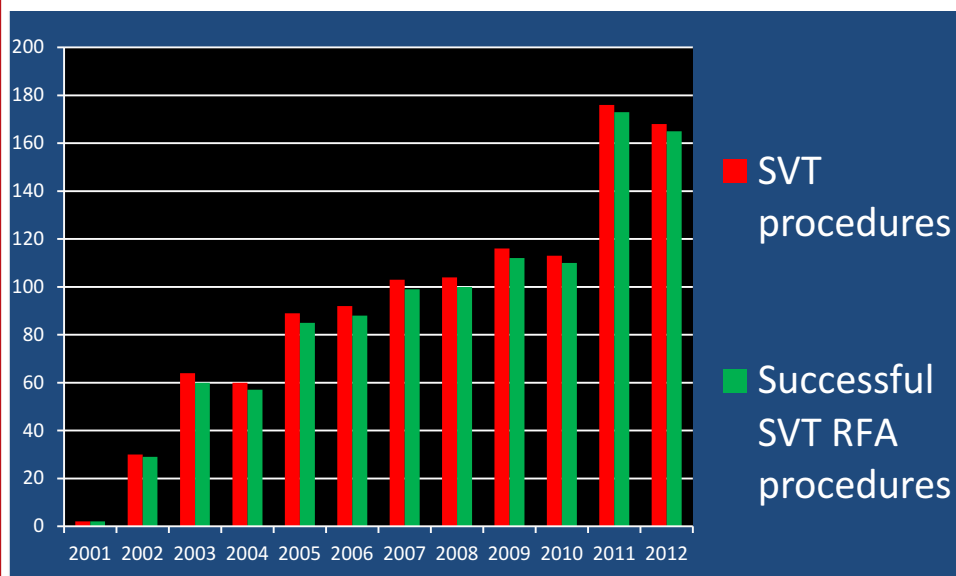
Over the past 10 years **1445 patients** underwent EP procedures at our center.

Diagnostic EP studies (EPS) were performed in 253 patients, whereas **therapeutic procedures (EPS and RFA) were performed in 1192 patients.**

Diagnostic EPS was performed for risk stratification for SCD in patients with LV dysfunction presenting with syncope and to rule out or confirm infraHis AV block in patients with IVCD and syncope.

Diagnostic EP procedures such as SNRT were performed in selected patients to rule out or confirm SSS. EPS was carried out in patients presenting with syncope and having structural heart disease (e.g. HCM).

### SVT procedure and success



Out of total of 1445 patients, **1117 patients had SVT of whom 1079 patients (96.6%) had successful RFA of the SVT.**

EPs and RFA was performed in 1192 patients out of which **1117 (93.7%) patients had SVT and 75 (6.3%) patients had VT.**

According to NASPE catheter ablation registry which included 3357 procedures from 68 centers, it was observed that 96 % of the patients with AVNRT and 94 % with AVRT, 52-80 % with

Atrial tachycardia, 86 % idiopathic Ventricular Tachycardia(VT) underwent successful ablation (RFA).

**Our success rates closely mimic this international standard and is comparable to any large volume center in the world.**

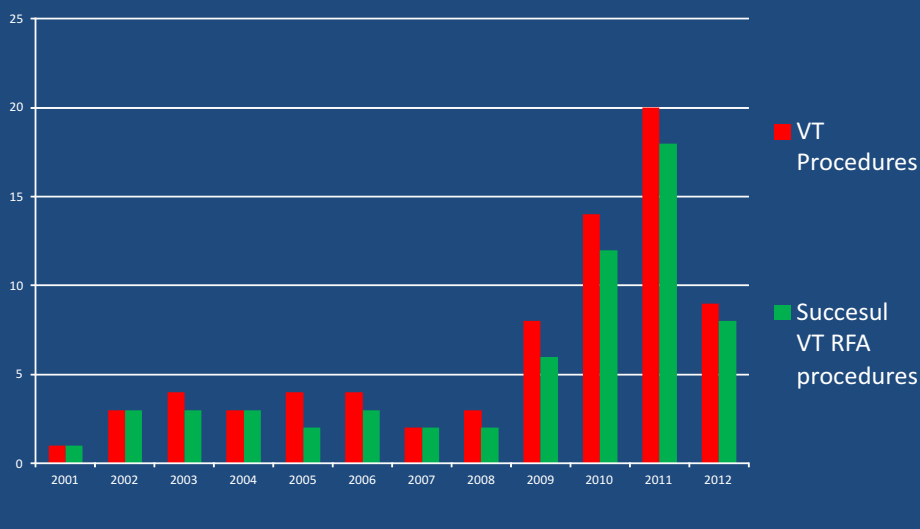
### Reasons of SVT recurrence / non-success

There is a small but definite percentage of patients who had non-success or recurrence after RF ablation. Generally, these patients fall in one of the following categories: significant structural heart disease (e.g. Ebstein's anomaly, IVC interruption), arrhythmogenic focus in close proximity to important conduction tissue(e.g. Mid-septal Accessory pathways, AT close to AV Node, junctional tachycardias). Similarly, Patients with multiple accessory pathways, especially in Right Free Wall region and atypical flutter were also associated with recurrence or unsuccessful ablation.

### Reasons of VT recurrence / non-success

VT need to be tackled differently than SVT, as the etiology and the substrate is completely different. Some of the causes of recurrence after RFA are papillary muscle origin of VT (closely mimics ILVT, Fascicular tachycardia), Structural heart disease, scarred ventricle, Deep focus of VT, hypertrophied muscles, Epicardial origin of VT with focus close to epicardial coronary arteries.

## VT procedures and success



**Of the 1445 patients, 75 had VT, 63 of these (84%) had successful RFA for the VT.**

### Complications

EPS and RFA is a relatively safe procedure in high volume centers. In the NASPE data, out of 3357 total patients, 8 patients had cardiac tamponade, 1 patient had Acute Myocardial Infarction (AMI), 5 patients had AV block, 1 patient had Femoral Artery pseudoaneurysm, 2 patients developed pneumothorax, 2 had pericarditis and 1 patient had significant TR.

At our center, out of 1445 patients, 3 patients had cardiac tamponade

(treated by pericardiocentesis) and 1 patient had AV block. This again, is comparable to the international standards of care.

### Conclusions

- ◆ Arrhythmia management is a highly refined science and art.
- ◆ EP and Ablation is a "curative" procedure with high success rates and low complications in skilled hands at high volume centers.

### Electrophysiology procedures available at CIMS

- 1) Electrophysiology studies (EPS) for diagnosis of cardiac arrhythmia (conventional and 3 Dimensional Mapping System)
- 2) Radiofrequency Ablations (RFA) of complex cardiac arrhythmias
- 3) Pacemaker Implantation
- 4) Biventricular Pacing (Cardiac Resynchronization Therapy) for heart failure
- 5) Automatic Implantable Cardioverter Defibrillator (AICD) implantation
- 6) Comprehensive Device Follow up Clinic (Pacemaker, CRT, AICD, ILR, ICM)
- 7) Carto-3 System : State-of-the-art 3-dimensional imaging and mapping system offers enhanced visualization for treating arrhythmia patients

## And the modern era of Hybrid Aortic Surgeries begins in Gujarat

### ***“Complicated Acute Type B Aortic dissection with mesenteric ischemia repaired successfully at CIMS”***

Dear Doctors,

Medical science has witnessed a revolution in last decade and we are moving from 'Big Scars' to key hole repairs in all the avenues of surgical spectrum/field.

Ever since Jaun Parodi described endovascular aneurysm repair in 1991, management of aortic aneurysms has changed a lot. With the advent of hybrid repairs (open surgery + endovascular intervention) the mortality and morbidity of thoracic aortic lesions have come down significantly.

Our team (Dr. Srujal Shah – Vascular and Endovascular Specialist, Dr. Milan Chag – Interventional Cardiologist and Dr. Niren Bhavsar – Cardiac Anaesthetist) recently performed a Hybrid Repair of Acute Type B Aortic Dissection complicated by visceral malperfusion syndrome.



Dissection Entry Tear

SMA compromise 95%

A 65 year old gentleman, known hypertensive, Type A personality was referred from Rajkot with sudden onset of severe back & abdominal pain, with a CT Angio showing dissected descending thoracic & abdominal aorta.

As per guidelines, he was initially kept on IV beta blocker and Inj. SNP (Whit & Pamer Regimen) in ICU but intractable abdominal pain due to SMA compromise compelled us to repair the dissection. DSA and Multislice CT Angio were done at CIMS for perfect planning. In view of proximity of entry tear to left subclavian artery, it was decided to cover it CCA and Lt SCA to provide secure landing zone for Endograft. Staged hybrid repair was planned as open repair is fraught with 90% mortality risk.

**Stage-I:** Right to left cross over carotid-carotid bypass using 7 mm dacron graft under GA & cerebral protection with carotid shunts.

**Stage-II:** Thoracic & distal aortic arch stent-grafting to cover Lt common carotid artery, Lt subclavian artery and the dissection entry tear, using Medtronic Valiant Stent Graft (38 mm x 38 mm x 150 mm) was performed under GA.

**Result:** Excellent outcome with the following results

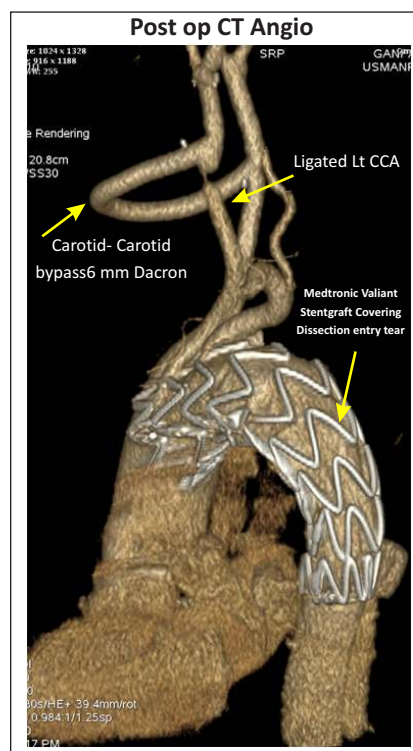
- (1) Entry tear sealed successfully
- (2) False lumen collapsed & back pain relieved
- (3) SMA opened up and abdominal angina cured
- (4) Blood pressure came under control

Patient was discharged on 3rd day without any complications.

To our knowledge this is the first case of such complexity performed on semi-emergency basis independently by in house doctors team without any proactor from outside.

We congratulate and thank our team members, hospital staff and patient as well for thorough co-operation to achieve this success.

Medical fraternity should take pride for such achievements and spread awareness amongst other doctors and patients so that hundreds of death due to acute aortic syndromes can be prevented.



***“The World is advancing – Advance with us”***

Courtesy

Dr. Srujal Shah, Dr. Milan Chag & Dr. Niren Bhavsar

# 10<sup>th</sup> Annual Scientific Symposium

19<sup>th</sup> Year of Academics

**CIMSRE-CON**

**2014**

Education For Innovation

**January 10-12, 2014**



in association with  
American Association of  
Physicians of Indian Origin (AAPI)



## **CIMSRE-CON** TRACKS - DAY-1 (January 10, 2014)

<b>CARDIOLOGY TRACK</b>	<b>Session Directors</b>
◆ Introduction Session	Dr. Milan Chag / Dr. Keyur Parikh
◆ Coronary Artery Disease / Acute Coronary Syndromes	Dr. Milan Chag / Dr. Keyur Parikh
◆ Plenary Lectures by International Speakers	Dr. Milan Chag / Dr. Keyur Parikh
◆ Hypertension / Lipids & Cardiovascular Risk Management	Dr. Urmil Shah / Dr. Hemang Baxi
◆ Medical Devices in Cardiology / Interventional Cardiology	Dr. Keyur Parikh / Dr. Anish Chandarana
◆ Debates	Dr. Anish Chandarana
◆ Special Topics	Dr. Vineet Sankhla
<b>Satellite Sessions (Time : 8.00 pm - 10.00 pm)</b>	
◆ Pharmacology & Therapeutics - 1 & 2	Dr. Milan Chag / Dr. Hemang Baxi
◆ Cardiology Guidelines	Dr. Urmil Shah / Dr. Satya Gupta
◆ Peripheral/ Endovascular /Diabetic Foot	Dr. Hemang Baxi / Dr. Srujal Shah
◆ Stroke	Dr. Anish Chandarana / Dr. Vineet Sankhla

## CIMSRE-CON TRACKS - DAY-2 (January 11, 2014)

CARDIOLOGY TRACK	Session Directors
◆ Interactive ECGs/Arrhythmia	Dr. Ajay Naik
◆ Atrial Fibrillation/ Arrhythmia	Dr. Ajay Naik / Dr. Vineet Sankhla
◆ Plenary Lectures	Dr. Milan Chag / Dr. Keyur Parikh/Dr. Ajay Naik
◆ CIMSRE-Oration	Dr. Keyur Parikh / Dr. Milan Chag
◆ Congenital Heart Disease / Structural	Dr. Milan Chag / Dr. Satya Gupta
◆ Heart Failure	Dr. Ajay Naik / Dr. Urmil Shah
◆ Live Case Session	All Cardiologists
<b>CARDIOVASCULAR THORACIC SURGERY (CVTS) TRACK</b>	Dr. Dhiren Shah / Dr. Dhaval Naik / Dr. Srujal Shah
<b>NEONATAL &amp; PEDIATRIC CRITICAL CARE TRACK</b>	Dr. Amit Chitaliya
<b>CRITICAL CARE &amp; PULMONARY TRACK</b>	Dr. Bhagyesh Shah / Dr. Vipul Thakkar /Dr. Harshal Thaker/ Dr. Dhanashri Atre Singh / Dr. Nitesh Shah / Dr. Amit Patel/ Dr. Pranav Modi
<b>TOTAL KNEE REPLACEMENT (TKR) TRACK</b>	Dr. Hemang Ambani / Dr. Chirag Patel / Dr. Amir Sanghavi / Dr. Ateet Sharma

## CIMSRE-CON TRACKS - DAY-3 (January 12, 2014)

	Session Directors
<b>CLINICAL CARDIOLOGY TRACK</b>	"-----"-----"
<b>CARDIOVASCULAR THORACIC SURGERY (CVTS) TRACK</b>	"-----"-----"
<b>NEONATAL &amp; PEDIATRIC CRITICAL CARE TRACK</b>	"-----"-----"
<b>CRITICAL CARE &amp; PULMONARY TRACK</b>	"-----"-----"
<b>TOTAL KNEE REPLACEMENT (TKR) TRACK</b>	"-----"-----"
<b>INTERNAL MEDICINE TRACK</b>	Dr. Milan Chag / Dr. Keyur Parikh
<b>TRAUMA CARE TRACK</b>	Dr. Sanjay Shah

## CIMSRE-CON 2014 Registration Form

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)	<input type="checkbox"/> ₹ 6000	<input type="checkbox"/> ₹ 7000	<input type="checkbox"/> ₹ 9000
Certification Courses (January 11-12, 2014)	<input type="checkbox"/> ₹ 2500	<input type="checkbox"/> ₹ 3500	<input type="checkbox"/> ₹ 4000
** Deposit for Hotel Accommodation (Separate cheque)	<input type="checkbox"/> ₹ 3500	<input type="checkbox"/> ₹ 3500	<input type="checkbox"/> ₹ 3500
For students doing MD (Medicine) with proof	<input type="checkbox"/> ₹ 3000	<input type="checkbox"/> ₹ 3500	<input type="checkbox"/> ₹ 4000
Spouse Hotel Registration (Non- refundable)	<input type="checkbox"/> ₹ 3500	<input type="checkbox"/> ₹ 3500	<input type="checkbox"/> ₹ 3500
Foreign Delegates	<input type="checkbox"/> \$ 400	<input type="checkbox"/> \$ 500	<input type="checkbox"/> \$ 600
In case of cancellation	25 %	50 %	100 %

\*\* Hotel Accommodation is optional. If you have applied for accommodation, please send a separate deposit cheque of ₹ 3500 to cover the cost of your stay for two nights. Spouse hotel registration will be charged extra. Students also need to pay for Hotel Accommodation at the same rate.

Please note that it is mandatory to provide all the information. Please fill in all fields in CAPITAL LETTERS

Full Name

Qualification

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