

venous system. After a mean follow-up of 25 months, AVNRT did not recur in any patient.

**Conclusions:** Catheter ablations were efficiently and effectively performed fluoroless in adults with AVNRT using 3D Electro-anatomical mapping using St. Jude En-site system using NavX patches. This non fluoroscopic technique was feasible, posed no additional safety concerns, and long term success is documented on follow up.

### Radiofrequency ablation of atrioventricular nodal re-entrant tachycardia (AVNRT) – NIMS experience

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**Background:** Supraventricular tachycardias cause disabling symptoms and affect quality of life. Management is pharmacological and catheter based. Pharmacological treatment is limited by side effects and less efficacious. Radiofrequency catheter ablation offers cure for Atrioventricular nodal re-entrant tachycardia (AVNRT) with minimal adverse events. Catheter ablation can be defined as the use of an electrode catheter to destroy small areas of myocardial tissue or conduction system, or both, that are critical to the initiation or maintenance of cardiac arrhythmias. Radio-frequency current is alternating current that is delivered at cycle lengths of 300 to 750 kHz when used for catheter ablation. Tissue temperature 50 °C or more causes irreversible injury, power- 40- 50 Watts.

**Methods:** Patients presenting to our centre between 2010-14 diagnosed as AVNRT on EPS were included in this study. Patients further underwent radiofrequency ablation.

**Results:** Total number of patients-95. Mean age-38±14yrs. Male/Female-53/42. In slow –fast pathway type out of 87 patients 80 patients (91%) had successful ablation. In atypical fast-slow path type out of 5 patients 4 patients (80%) had successful ablation. In slow-intermediate type out of 3 patients 3 (100%) had successful ablation.

**Conclusions:** Radiofrequency catheter ablation is safe and effective treatment for AVNRT. High success rates with low complication/relapse seen at our center.

### Radiofrequency ablation of accessory pathways

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**Background:** Radiofrequency ablation has emerged as a curative treatment choice for symptomatic patients with Atrioventricular Accessory pathways. The aim of the study was to study the efficacy of radiofrequency ablation of symptomatic patients with accessory pathways and to compare the rates of successful ablation in pathways based on location.

**Methods:** During the period from July 2010 to June 2014, 154 patients with various manifestations of AP underwent EPS and RFA in NIMS were enrolled and followed up for 6-18 months.

**Results:** 154 patients with an average age of 22±13 yrs underwent EPS and RFA. Of these 88 patients had manifest conduction with a success rate of 90% and 54 concealed conduction with a success rate of 89%. No patients had procedural complications. 6 patients had atrial fibrillation with rapid antegrade conduction. 4 patients had multiple pathways which were successfully ablated. 2 patients had accessory pathway located at CS diverticulum, 1 patient underwent successful ablation. 2 patients had recurrence of pre-excitation (left ant. Lat. and left lat. pathway) and underwent successful reablation.

**Conclusions:** Our center reports success rates comparable to other series reports. RFA provides long term durable cure from disabling symptoms and decrease risk of sudden cardiac death. RFA helps to avoid drug related side effects while providing durable cure for tachycardia and minimizing risk of sudden cardiac death.

### Study of echocardiographic evaluation in dual chamber vs single chamber pacing SEEDS

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**Background:** Dual-chamber pacing (DDD) is believed to have an advantage over single-chamber ventricular pacing (VVI) with a higher economic burden and peri-operative complication.

The aim of the study was to determine whether patients with implanted pacemaker (PM) for complete heart block (CHB) gain significant immediate and long-term benefit from DDD compared with VVI Pace maker.

**Methods:** This prospective experimental study included patients with CHB and DDD Pacing mode for at least 3 months. Patients were submitted to a standard protocol, which included clinical assessment, transthoracic echocardiographic examinations, quality of life (QoL) questionnaires and 6 minute walk test at base line and during follow-up. Mode change to VVI for 3 months and shifting back to DDD was done with follow up at 1<sup>st</sup> day and 3<sup>rd</sup> month in both groups. All these parameters obtained were compared using t test.

**Results:** Mean patient age was 55.7 ± 14.7 years and PM implanted for 23.2 ± 25 months. NYHA FC worsened in VVI group. PM syndrome was presented in 20% in VVI. The mean walking distance increased in DDD pacing as compared with VVI pacing (197 + 100.9 m vs 175 ± 100 m, P = 0.005). Within 24 hours there was marked decrease in pulmonary artery velocity (80 + 30 vs 102 + 5.2, P = <0.001) and marked reduction in Aortic VTI (20.3 + 4.3 vs 23.4 + 4.8, P = <0.001) in VVI vs DDD and it continued up to 3 months. Transmitral E velocity in VVI pacing mode showed higher values (89 +26 VS 68 +20, P = <0.0001). After 3 months there was increase in EDV in VVI (104 + 28 vs 103.5 + 27.06, P = 0.042) and decrement in EF (56.97 +10.42 VS 56.6 +10.6, P = 0.02). There is no significant enlargement of the left atrium in VVI. QoL was significantly different between the two groups and was better in DDD group.

**Conclusion:** DDD pacemaker is better than VVI pacing in terms of better Functional class, QoL, lesser incidence of pacemaker syndrome and Echocardiographic hemodynamic profile.