Incidence, clinical characteristics, electrophysiological characteristics and outcomes of patients with baseline PR prolongation undergoing radio frequency ablation for Atrioventricular nodal reentrant tachycardia.

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Introduction: Atrioventricular nodal reentrant tachycardia (AVNRT) is most common supraventricular tachycardia (SVT). PR prolongation on baseline electrocardiogram (ECG) is uncommon. Slow pathway ablation/modification is the recommended therapy for AVNRT. Slow pathway ablation/modification in patients having prolonged PR at baseline sinus rhythm is safe and effective and has been described in various studies. Incidence of AV block post procedure has been shown to be around 0-9.3% in a various studies as compared to overall incidence of 0-5% in unselected population. Those patients with higher PR interval (>300ms) have higher probability to develop AV block after slow pathway modification. Reithmann et al demonstrated that retrograde fast pathway ablation for patients with a first-degree AV block was associated with a higher intra-procedural risk of complete AV block but did not result in the development of higher-degree AV block during the long-term follow-up of up to 9 years. In this study we evaluate the safety and efficacy of slow pathway modification in patients with a baseline prolonged PR interval.

Methods: Over 10 years, out of 1435 consecutive patients having AVNRT, 16 patients having PR prolongation at baseline were included in the study. Retrospective analysis of clinical, electrophysiological characteristics and outcomes was done.

Result: Out of 1435 patients with AVNRT, 16 (0.9%) patients had baseline PR prolongation on ECG. Average age was 69 +13.1 years. 10 (62.5%) were males. The average PR interval was 264+28.5 msecs. Slow fast AVNRT was seen in all. Anatomical site of success was lower part of Koch's triangle in all patients. Junctional rhythm was noted in all during ablation. No patient had AV block or significant increase in PR interval peri-procedure. PR interval decreased by more than 20ms in 10 (62.5%) patients post ablation. AH Wenckebach increased on an average of 58msec post ablation. Only one patient developed AV block on follow up.

Conclusion: In patients having AVNRT, PR prolongation on baseline ECG is uncommon. Ablation at slow pathway can be done safely and effectively. AH Wenckebach point increases immediately post ablation. Risk of AV block persists on follow up.