Conduction property of bilateral nodal extensions and their roles in the development of atrioventricular nodal reentrant tachycardia

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The incidence of Atrioventricular Nodal Reentrant Tachycardia (AVNRT) is relatively uncommon during infancy, and increases with age. A possible reason for the tendency is explained by the immaturity of the Atrioventricular Node (AV node) in children. Histologically, it has been speculated that the right-sided nodal extension, which extends posteriorly along with the tricuspid valve from the compact AV node, acted as the anatomic substrate for the slow pathway during tachycardia attack. Several past studies revealed the growth-related changes in the length of the right-sided nodal extension, which supported the hypothesis of the relationship between the length of the right-sided nodal extension and the likelihood of AVNRT attack. Meanwhile, the role of left-sided nodal extension in the development of AVNRT has not been fully understood. A previous histological study reported that there was little correlation between growth and the length of left-sided nodal extension, contrary to the right-sided nodal extension. Several case reports of successful left-sided ablation for AVNRT that could not be ablated with the right-sided approach indicated the possibility of involvement of the left-sided nodal extension in some forms of AVNRT attack. In this presentation, I will discuss the conduction characteristics of both the left and the right-sided nodal extensions and their roles in the development of AVNRT attack.

Biography

Satoru Takeno has completed his graduation from Akita University School of Medicine in 2001. After receiving training for General Pediatrics and Pediatric Cardiology, he completed his Postgraduate study at Mahidol University, Thailand. He is an Assistant Professor at Kindai University, where he engages in pediatric electrophysiology and catheter ablation.

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