Not all need 3D

Ahmad Faiz Bin Mohd Ezanee
Mohd Firdaus Mohd Ali
Ru Hoi Tan
Chew Wei Leong
Yi Zhi Cheng
Ahmad Shukri Saad
Sathvinder Singh Gian Singh
Saravanan Krishinan

Introduction: Three-dimensional mapping (3-D) systems are frequently used for ablation of supraventricular tachycardia (SVT). Studies have demonstrated radiation dosage reduction with 3-D, helps to protect patient and the health provider from radiation. However, not all cases that is done under 3-D guidance are successful. This is our first experience in our centre whereby 3-D guidance cardiac ablation not able to terminate the SVT, but with conventional radio-frequency ablation (RFA) therapy do terminate the SVT in a symptomatic 7 years-old girl with Wolf-Parkinson White (WPW) Syndrome with history of SVT. She was admitted in January 2019 for persistent tachycardia with heart rate 200 beats per minute and tachycardia terminated with Adenosine. ECG post Adenosine showed short PR interval with present of delta wave.

Methods: ECHO: Good Ejection Fraction, normal finding with no pericardial effusion nor clot/thrombus Baseline in WPW -AP 1:1 340 (mild-to moderate Antegrade risk) -AP ERP 600/360 (mild to moderate Antegrade risk) -VAB non- demonstrable, concentric -SVT CV 360 -Mapping earliest V Anteroseptal just above His -RF ablation eliminate antegrade AP -V pacing mapped earliest A in the same vicinity -RF ablation here terminate retrograde AP conduction

Result: Post RF: No AH jump with atrial extra-stimulus testing (AEST). -Parahasian pacing nodal response seen -Adenosine 12mg given and atrioventricular block (AVB) & ventriculoatrial block (VAB) seen Impression: Right Anteroseptal accessory pathway (AP) causing orthodromic reciprocating tachycardia (ORT).

Conclusion: In conclusion, even though 3-D cardiac ablation is equally effective and safe with conventional RFA, not all cases are successful under 3-D guidance. Careful ECG & EGM interpretation is mandatory to determine successful procedure outcome.