

707 Transvenous radiofrequency ablation of epicardial posterior-septal accessory pathways in children with WPW syndrome: can technology and imaging innovations improve the outcome?

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Aims: The aim of the study was to analyse our recent single-centre experience about epicardial posterior-septal accessory pathways transcatheter ablation in children and young patients using radiofrequency through the coronary sinus, in order to understand which mapping and ablation strategy is associated with higher success rate and safety.

Methods and results: We reviewed all the cases of ablation of overt accessory pathways (in Wolff-Parkinson-White syndrome) with epicardial posterior-septal localization performed in children or young patients at our institution in the last 5 years. Twenty-two paediatric patients (mean age: 13 ± 3 years) with epicardial posterior-septal accessory pathways (15 in coronary sinus and 7 in the Middle Cardiac Vein) underwent radiofrequency transcatheter ablation with CARTO 3TM. Acute success rate was 77%. No patient was lost to follow-up (mean time 14.4 ± 9 months). The recurrence rate was 18%. Two patients underwent a successful redo-procedure; the overall long-term success rate was 68%. NAVISTAR[®] catheter presented the highest acute success rate in the coronary sinus. NAVISTAR SMARTTOUCH[®] was the only catheter that did not present recurrences after the acute success and it was successfully used in two patients previously unsuccessfully treated with a NAVISTAR THERMOCOOL[®]. Integration with angio-CT of coronary sinus branches obtained with CARTOMERGE was associated with higher success rate in patients with a previous failed ablation attempt.

Conclusions: Epicardial posterior-septal accessory pathways can be successfully treated with transvenous radiofrequency ablation in more than half of the cases in children/young patients. Acute success rate does not seem to depend on catheters used but contact-force catheter seems to be useful in cases with recurrences. Image integration with cardiac-CT reconstruction of coronary sinus branches anatomy can be useful to better guide ablation in case of previously failed attempts.

