

Catheterablation of accessory pathways in children and adolescents: results in 167 consecutive patients

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Introduction: Catheterablation (CA) has become the treatment of choice for accessory pathway (AP) mediated tachycardia. Despite of the high success rate there are pathways which are not amenable for catheter ablation or need more procedures.

Methods: A total of 167 consecutive patients younger than 19 years with ventricular preexcitation or AP mediated tachycardia and normal heart intended to treat with CA in our institute were included. Study period 2004-2010. Ablation energy radiofrequency:RF,cryo:C) and pathway localisation (right:R, left:L,septal:S) related to success and recurrence were evaluated.

Results: A total of 176 APs were diagnosed in 167 pts (R:25, S:81, L:70). CA was abandoned in 15 pts because of high cost benefit ratio (S:15, Cryomapping:11). Acute success was achieved in 142/152 pts, with 151 Aps (R:17, S:62, L:72, RF:133, C:18). 7/10 pts had repeat procedure and in 4/7 success were achieved in the later procedure (R: 2, S:2, RF: 4). 18 pts were lost for follow up. 103 pts (R:10, S:43, L:49, RF:91, C:11) had no recurrence during the follow up (median:1 yr). 17 pts had recurrence of preexcitation (R:3, S: 9, L:5, RF:13, C: 4). 10/17 pts had repeat procedure in all with acute success but in 4 pts with further recurrence (R:1, S:2, L:1). 4 pts ablated with concealed AP and recurrent palpitation had a redo procedure in 3/4 with success (R:2, L:1). Recurrence after RF: R:4/11, S: 6/62, L: 5/63 and after C: R:1/2, S:4/16, respectively.

Conclusion: Despite of the safety of cryoenergy significant number of septal APs are not amenable for CA in children. Recurrence rate of septal APs after cryoablation is more than twice as after RF ablation. CA of left sided APs have the highest success rate and lowest recurrence rate. Right sided APs have the highest recurrence rate after CA.