**FLUOROSCOPIC VS NON-FLUOROSCOPIC IMAGING DURING PEDIATRIC CATHETER ABLATION: A TIME-SAFETY-COST-EFFICACY COMPARISON**

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Introduction: Radiation (Rad) concerns during catheter ablation (Abl)for supraventricular tachycardias (SVT) have evolved use of non-fluoroscopic 3D imaging (3DI). However, to date, there are no studies that compare time, cost, safety and efficacy between use of combined fluoroscopic (FI)/3DI vs 3DI alone during SVT Abl in the young.

Methods: Data from all patients (pts) undergoing electrophysiology study and Abl for SVT (AVRT, AVNRT, AET) from 2009 to 2011 were reviewed. General anesthesia (GA) and radiofrequency and/or cryo-ablation energies were used for each pt. Of our two established Electrophysiologists, one used FI/3DI while the other only 3DI for mapping/ablation. Pt radiation dosage, study time, GA cost, GA time and ablation success rates were compared.

Results: A total of 80 pts (mean age 13.2y) underwent SVT Abl, divided into 2 groups: Group 1: FI/3DI and Group 2: 3DI only. SVT types were comparable between groups: AVRT was seen in 73%, AVNRT in 23% and AET in 4%. Pt gender, age, acute success and recurrences to 2 y post Abl were comparable between groups. There were no adverse effects in any group. As expected FI/3DI had more FI time (16.2 vs 1.1min, p<.0001) and Rad (3.5 vs 0.46, p<.0001), but Rad were comparable to naturally-occuring (3mGy/y). 3DI only had significantly longer GA time, study duration and cost (p<.0001).

Conclusion: Both FI/3DI and 3DI only compare equally in success and lack of complications. Potential adverse effects of limited Rad vs longer time and cost need to be weighed when deciding which imaging to use.