Pediatric Electrophysiology Study and Ablation at Beijing Children’s Hospital – The First 15 Years

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Introduction: To describe the development and current characteristics of pediatric electrophysiology and ablation at a large children’s hospital in Beijing, China.

Methods: Patient and procedural data was collected from a hospital database including demographics, procedural volume, substrate, acute and chronic success rate, as well as procedural cost. Descriptive statistics were used to analyze the data.

Result: Case volume increased from 2 in 2003 to 246 in 2017. Treated patients were 59.0% +/- 2.8% male. Patient age was 8.0 years +/- 3.1 years (1.3 – 16.5 years). Weight was 35.7 kg +/- 14.0 kg (9 – 94 kg). Congenital heart patients comprised 2.13% of the cohort. Most substrates were AVRT (38.5%) and AVNRT (29.0%). Asymptomatic bidirectional accessory pathways (WPW) were not ablated. Acute and chronic success rates were 90.4% +/- 5.6% and 87.2% +/- 8.1%, respectively. There was no increase in either success rate over time (R2 = -0.22). Fluoroscopy use decreased from a maximum of 133.73 minutes +/- 34.0 minutes in 2006 to no fluoroscopy use since 2016. Computerized mapping was used regularly beginning in 2013. There were no major complications. Total per case cost converted from Chinese Yuan to US Dollar and normalized to 2017 US dollars was $6,546 +/- $607 ($5,728 in 2004 - $7,412 in 2015). Similar procedures in the United States may cost $74,553 +/- $1,961.

Conclusion: Pediatric ablation in Beijing, China is performed with increased volume though stable acute and chronic success rates. Cost of ablation is likely significantly less than that in the United States.