

## **Presenting Features And Clinical Outcomes Of Children Requiring DC Cardioversion In South Wales.**

*Scheller M., Fortner R., and Uzun O.  
University Hospital of Wales, Cardiff, UK.*

Introduction: DC cardioversion is a drastic intervention in childhood and causes great anxiety in many clinicians to use it despite being part of paediatric life support training programs. A recent survey amongst paediatric trainees reported that 56% felt they were not confident in defibrillation. There is no detailed study looking at its use and technical-clinical issues encountered in day to day practice in children. We aimed at investigating the presenting features and clinical outcomes of children requiring DC cardioversion in South Wales.

Methods: We reviewed all children who had received DC cardioversion at the University Hospital of Wales (UHW) in the past 20 years.

Results: 30 children were identified. Most children (19=62%) requiring cardioversion were under 1 year of age. 14 children presented to UHW, 10 transferred from other hospitals as an emergency due to reluctance to perform cardioversion locally. Six were admitted electively for DC cardioversion. 10 children (33%) were unwell for longer than 24 hours prior to presentation, mostly with nonspecific symptoms of lethargy and poor feeding. 13 (43%) required emergency intubation at presentation. Only two children of this cohort was shocked out of hospital by paramedics. Seven neonates had an antenatal diagnosis of supraventricular tachycardia (SVT) and three didn't. Only eight children (27%) had congenital heart disease with Ebstein's anomaly being the most common diagnosis and only two of these presented as an emergency. Further three children were later diagnosed with dilated cardiomyopathy. Seven children had WPW syndrome and one child had long QT syndrome. Cardiac function around the time of cardioversion was impaired in 17 children (56%). 9 (30%) children required cardioversion for ventricular tachycardia or fibrillation, 21 (70%) for SVT. In 18 children sinus rhythm was restored after 1 shock (64%), children presenting in VF required 3 or more shocks. 28 children (93%) survived and 2 died.

Conclusions: DC cardioversion in the treatment of acute SVT in children is rarely required. Majority of DC cardioversions were performed by cardiologists at a tertiary centre as local specialists felt uncomfortable with the procedure. There is a need to improve understanding of DC cardioversion procedure among paediatricians.