



Service Priorities and Programmes
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**A Simulation Approach: Getting to Know and Manage Paediatric
Supraventricular Tachycardia**

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Introduction

Supraventricular tachycardia (SVT) is an abnormally fast rhythm originating above the ventricles. It is commonly encountered in paediatric cardiac setting. In order to enhance the nurse's knowledge about SVT, a simulation approach is used to model a real world environment in a simplistic way to help develop an understanding of the key concepts. It is regarded as an effective adjunct to hands-on patient care.

Objectives

1.Understand the reentry SVT mechanism 2.Know the difference between the two types of SVT that are commonly encountered 3.Arouse nurse's interest to predict the site of abnormal pathway leading to SVT on the 12- lead ECG if the patient is diagnosed with Wolff-Parkinson-White (WPW) Syndrome 4.Understand the nurses' roles in patient care during SVT attacks

Methodology

1.16 nurses with variable working experience in Paediatric Cardiology, from 2 to over 10 years, were invited to complete the questionnaire. The content of survey includes:
a.Knowledge about reentry conduction mechanism b.Difference between two common types of paediatric SVT – atrio-ventricular junctional reentry tachycardia (AVJRT) and atrio-ventricular reentry tachycardia(AVRT) c.Patient care during SVT attacks d.Patient teaching after radiofrequency ablation (RFA)/ablation 2.A simulation approach to videotape the following key concepts: a.Different nurse roles in patient care during SVT attacks b.Attempts to terminate SVT: - Place a bag of ice curds / ice pad on the upper half of the child's face - Intravenous push of ATP techniques - Synchronized cardioversion for the child with unstable haemodynamics 3.Team debriefing using a recorded video: How to work smarter and to be more cooperative 4.Briefly describe SVT using powerpoint format,this information together with the video were uploaded on the computer for knowledge sharing 5.An evaluation was conducted to assess nurses' perceived knowledge gain and overall satisfaction with the programme

Result

Before intervention: Only one nurse fully understood the difference between AVJRT

and AVRT. 62.5% did not know the mechanism of reentry conduction although they felt comfortable to provide patient teaching after RFA/cryoablation, an interventional procedure to eliminate the abnormal pathway leading to SVT. Also, 56% participants did not feel comfortable in patient management during SVT attacks. Outcome: 16 nurses were invited again to complete the questionnaire after watching the video and the powerpoint. About 95% fully understood the mechanism of reentry conduction, knew the difference between AVJRT and AVRT, and felt comfortable in patient care during SVT attacks. 100% of participants found it very helpful for the orientation of new staff.