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MAST – AN INVALUABLE ADDITION TO THE PAEDIATRIC AIRWAY RESCUE TROLLEY

M. Janowski, R. Gan, E. Liddell, A. Pearson, P. Gorton, B. Rajamani, N. Soundararajan, Hull University Teaching Hospitals NHS Trust, UK

Background

Stridor is a sign of airway obstruction. Paediatricians manage the majority of the stridulous children. However, anaesthetists are called when medical treatment fails. Paediatric critical upper airway obstruction is a challenging emergency that can be rescued by the ENT surgeons.

Problem

In 2017, two scary airway emergencies that required ENT input, highlighted the need for a pathway beyond the paediatric difficult airway guidelines.

Strategy for Change

The MAS (Making Airway Safe) algorithm and trolley (MAST) introduced by Southampton's ENT team, streamlines the approach to the management of paediatric critical airway obstruction.

In July 2020, we launched a QI project campaigning for the MAST alongside the PART (Paediatric Airway Rescue Trolley).

A team of key stakeholders including an ENT registrar, an ENT surgeon with a paediatric interest, a band 6 scrub nurse, the airway lead, the Paediatric anaesthesia lead, and the theatre coordinators presented a business case, sought funding, and obtained governance approval.

An equipment list and maintenance responsibilities were agreed on. The MAST trolley was finally ready on 1st March 2022.

Measure of improvement

Our intervention was aimed at informing all stakeholders about the availability of the trolley and training them on equipment assembly. Improvement was measured by the numbers of training sessions and people trained.

By 20th January 2022, four half day training days were completed. Two sessions were run as 'in situ' sessions in theatre while two sessions were run as a 'simulated scenario' on a paediatric stabilization course. Ten ENT surgeons, 19 anaesthetists, 2 theatre nurses, two paediatricians, three intensivists, two ED doctors, 4 ED nurses, three outreach nurses and four ODPs completed the training.

Lessons learnt

The 'in situ' sessions aimed at the familiarising the ENT surgeons and theatre staff with the MAST equipment. A 'stridulous toddler' scenario and a MAST/PART skill station was included as part a multi-disciplinary, multi-professional course. This appealed to the wider team that deals with paediatric emergencies.

It is difficult to measure the improvement in clinical outcomes as very few children require ENT input.

Message for others

The value of having a clear algorithm and an organised trolley with all the required equipment is appreciated when it is used for patient care. We had one such situation where the MAST trolley and algorithm facilitated smooth teamwork when an infant needed FONA.

The 'Making the Airway Safe' algorithm is a valuable cognitive tool that complements the DAS/APAGBI paediatric airway guidelines. Team training using simulated scenarios and drills at 6 monthly interval facilitates teamwork and effective management of critical airway obstruction in toddlers and infants.

Reference

<https://www.maketheairwaysafeteam.org.uk/>