Association of Paediatric Emergency Medicine

THE IMPACT OF A MULTIDISCIPLINARY SIMULATION PROGRAMME – BRIDGING THE GAP WITH PREHOSPITAL CARE

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Background Historically in-situ simulation teaching has been executed separately for in-hospital and prehospital teams. 11% of paediatric emergency attendances arrive by ambulance, affording paramedics a unique approach to dealing with the critically unwell child. However, paramedics deal with children’s emergencies infrequently and consistently report a lack of confidence in this area. Ongoing paramedic paediatric education varies from none to yearly updates, and they would welcome further training in paediatric emergencies.

Objectives To identify if including paramedics in our multidisciplinary simulation teaching would be mutually beneficial and add value to participants’ overall experience.

Methods Our department’s in-situ paediatric simulation teaching occurs every fortnight and is open to the paediatric and emergency medical and nursing teams. Over a 6-month period invitations were extended to our paramedic colleagues both formally and opportunistically.

Results Paramedics attended 40% of simulation sessions. On average 2 paramedics attended each session. There were approximately 10 participants (including observers) in each session. The scenarios ran for 15 minutes with a 15-minute debrief. Simulations took place within empty cubicles in the emergency department. Scenarios included croup, congenital heart disease and burns. Other team members included paediatric/emergency doctors, nurses, ODPs and nursing/medical students. Input from all multidisciplinary members was encouraged during debrief. Of the paramedics, 95% strongly agreed that they felt involved in the learning process, 98% enjoyed the debrief and 99% found the teaching useful.

Anecdotally doctors and nurses appreciated the unique experience and perspective that paramedics bring to the emergency care of children. The paramedics themselves valued the chance to feel more involved within the resuscitation team of the emergency department and follow the journey of a simulated patient once they arrive at hospital. It opened discussion about skills, roles and challenges of different disciplines.

Conclusions
- Build links with paramedics and other specialities by inviting them to your departmental simulation teaching.
- Paramedics value the opportunity to gain experience in managing paediatric emergencies within the safe simulation environment.
- Challenges include operational pressures on paramedic crews. Their ability to attend is often limited by real-time emergencies. We suggest keeping scenarios and debriefs short and focused (20–30 minutes).
- Keep the location within easy reach of the ambulance bay (eg in the emergency department). This makes attending simulation more accessible and relevant to paramedics.
- More work is needed to explore the mutual benefits of joint prehospital and hospital team simulation. We feel that sharing expertise across specialities improves knowledge and confidence in managing the critically unwell child and improves multidisciplinary team-working.

Paediatric Critical Care Society

COVID 19 ENCEPHALOPATHY IN A PATIENT OF RETT SYNDROME

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Background Covid 10 pandemic has extensively affected Paediatric patients so far. Day by day we are learning new symptomatology about this novel disease. We are presenting an adolescent patient with Rett syndrome who diagnosed as Covid 19 Encephalopathy which we believe is first reported case of Covid 19 encephalopathy in Rett syndrome

Objectives To highlight encephalopathy as presenting feature of Covid 19 case in rest syndrome.

Methods 14 year old female with background of Rett syndrome brought in via ambulance Paediatric A & E with fever, increased work of breathing and difficulty in waking up.

She was having cough and cold for last 4-5 days for which she was commenced on oral co-amoxyclov and then was tested for Covid 19 which came back as positive.

With progressive lethargy and difficulty in waking she was admitted in Paediatric ward.

She was suffering from global developmental delay, intractable epilepsy, scoliosis, previously was treated with puberty blocking agent for precocious puberty.

With her persistent deterioration of respiratory symptoms, we initially started her on CPAP in view of left lung collapse and subsequently was intubated with concerns of deteriorating consciousness. Her initial CT scan head revealed diffuse cerebral edema without any focal changes.

In view of possible encephalitis/Meningitis she was commenced on antiviral agents like remdesivir and was switched to IV meropenem.

Her repeat neuroimaging in the form of MRI brain revealed interval improvement in her cerebral edema without other abnormality.

Unfortunately, ongoing concerns of borderline increased intracranial pressure we could not perform lumbar puncture.

Her RTPCR for Cov-19 was positive.

Her PIMS TS panel including coagulation profile, D-Dimer, Vaccine titers were normal.

Investigations
- Her blood culture grew Candida dublinensis for which she was started on fluconazole.
- Her repeat neuroimaging in the form of MRI brain revealed interval improvement in her cerebral edema without other abnormality.
- Unfortunately, ongoing concerns of borderline increased intracranial pressure we could not perform lumbar puncture.
- Her RTPCR for Covid-19 was positive.
- Her PIMS TS panel including coagulation profile, D-Dimer, Vaccine titers were normal.