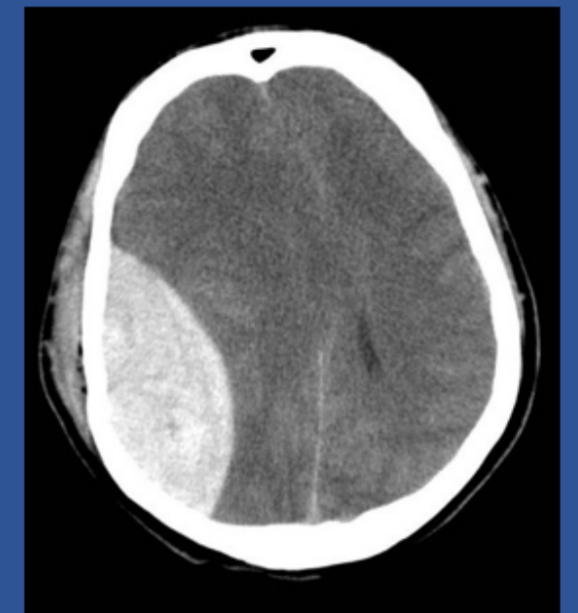


# HOW TRAUMA NETWORKS PATHWAYS AND MULTIDISCIPLINARY TRAINING CAN MAKE A DIFFERENCE IN TIME CRITICAL PAEDIATRIC TRAUMA

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## Case:

- An infant recently presented to our Major Trauma Centre (MTC) with an extradural haematoma.
- Key concern: rapidly falling level of consciousness requiring intubation in ED. Potential polytrauma.
- Specialist MDT management facilitated CT and immediate, rapid transfer to paediatric theatres.
- This infant was operated on within an hour of presentation by local neurotrauma team and has made a good neurological recovery.



## Discussion:

Major Trauma Networks (MTNs) exist to centralise and improve care. Studies show that they improve mortality and morbidity.

One conundrum is when neurotrauma is streamlined through major trauma centres (MTCs) where elective paediatric neurosurgery is not part of regular practice. It can be challenging for staff to maintain skills and up to date pathways to accommodate these infrequent cases.

Cases of this nature are time critical and are likely to have an improved outcome if operated on immediately rather than undergoing secondary transfer.

Governance pathways exist with specialist centres to support this time critical management

A neurotrauma pathway (Code Black) exists within this centre. Data has shown a reduction to less than 60 minutes with Code Black pathway activation, in contrast to 120-180 minutes in the absence of this pathway.

A novel simulation course has been designed for theatre staff and ODPs, allowing in situ, multidisciplinary simulation for serious neurotrauma and major haemorrhage. Aside from clinical management, it allows the candidates explore aspects surrounding human factors and communication between teams.

This case occurred during the COVID-19 pandemic. Despite the challenges of reduced theatre capacity and staffing, the time from presentation to knife to skin was less than one hour. This highlights the importance of education, simulation and maintenance of up to date communication systems, to address the management and governance of such challenging cases.

