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Surgical site infections in Pediatric Neurosurgery – A single centre audit

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Introduction: Surgical site infections (SSI) are the 2nd most common healthcare associated infection. SSI represents a significant cause of morbidity despite the introduction of multiple preventative practices including new protocols in pre-operative preparation, theatre practices and microbiology techniques. Few available data has identified strategies to reduce SSI risk. To our knowledge we present the first SSI audit into paediatric neurosurgical practices including all surgical procedures at a single unit.

Method: We have prospectively analysed 1 year of neurosurgical procedures in a single neurosurgical centre. We have prospectively collected data including type of procedure (implants, CSF implants, Spinal, Cranial Other). Total number of infections by month, infection by category (implants – ITB pumps etc, CSF - including shunts/stents/reservoirs, Spinal, Cranial, Craniofacial), infection by SSI subgroup (superficial, deep, organ/space - no implant, organ/space – implant) and organisms identified. We used the CDC/NHSN surveillance definition of healthcare associated infection and criteria for specific type of infection in the acute care setting. All data is recorded on a database for analysis. All non implant surgery was followed up for 30 days, implants had a one year follow up according to NICE guidance.

Results: We have analysed data on 516 patients for 608 procedures. We recorded 37 neurosurgical infection (6%) over 1 year. Organ / space infections represented the most significant group being 3,2% of overall infection rates, with Deep infections at 1.15% and superficial 1.65%. Most Infections occurred in the CSF group however a significant peak was seen in lumbar spinal surgery.

Conclusions: SI data collection is time consuming and demanding however the quality of the data collected has the potential to change / improve practice in a paediatric neurosurgical centre.