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MENINGOMYELOCELE REPAIR: A CASE REPORT

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ABSTRACT Meningomyelocele is the commonest congenital anomaly of CNS and major cause of serious developmental disability. Infection and rupture can be prevented if surgery is performed within 48-72 hrs of birth. Proper positioning , Fluid management, temperature regulations are essential for better outcome. Here, we report a case of 6 month Mch weighing 7 kg for MMC repair.

KEYWORDS : Meningomyelocele, neural tube defect, hydrocephalus

INTRODUCTION

During first 4 weeks of gestation embryogenesis and neural tube fusion occurs. Due to inability of fusion, herniation of meninges occur that can be meningomyelocele or meningeocele. In order to prevent neural tube defects folic acid given in first trimester reduces birth defects of brain and spinal cord by more than 70%. Abnormalities associated with MMC are Arnold Chiari Malformation (ACM) and Hydrocephalus.

A baby with meningomyelocele is born with the spinal cord exposed. A sac on baby's mid to lower back may cover the exposed spinal cord. The exact symptoms and their severity depend upon case to case.

Case Report

A 6 month old male child presented with a swelling in the back of neck. There were no symptoms at the time of presentation to OPD except the swelling itself.

On examination, the swelling is in the thoracic region with size 3 × 5 cm. MRI showed splaying of posterior element at D^1-D^3 vertebral bodies with herniation of spinal cord, meninges and nerve roots through a defect of size 0.8 cm into a multiseptated CSF filled sac.

The vitals of baby on presentation were stable and all routine blood investigations such as CBC, RBS, LFT, and RFT were within normal range. After explaining risk involved and taking written informed consent surgery was planned at 9:00 AM. I/V line secured with 24G I/V cannula in right forearm.NPO guidelines were followed as for Solids 6 hrs, Breast milk 4 hrs, clear fluid 2 hrs.

Before surgery child premedicated with Midazolam 0.5 mg/kg body weight. Isolyte – P started at rate of 6 ml/kg/hr. All standard monitoring (SpO2/ECG/NIBP) attached.

Preoxygenation was done using 100% O2 with adequate sized face mask on Jackson Reed's circuit and atropine 0.01 mg/kg and fentanyl 1 mcg/kg given. After a duration of 3 minutes propofol 10 mg I/v given followed by vecuronium 0.1 mg/kg for I/v induction. After adequate muscle relaxation the child was intubated with 3.5 mm ID uncuffed endotracheal tube.

Tube position confirmed using B/L air entry and capnography. The following mixture of gases with adequate tidal volume was given.

Vt 8ml/kg RR 18-22 /min O2 35% N2O 65% Sevoflurane 1-2 % Baby transferred to prone position for repair and bolsters kept under iliac crest. Utmost care was taken to maintain temperature of the child and surroundings. The surgery lasted for 90 minutes from skin incision to final suture.

Extubation has to be the most critical step and should always be performed when the child is awake and breathing adequate tidal volume. Intact cough and gag reflex, forced vital capacity more than 10 ml/kg body weight, maintenance of O2 saturation on spontaneous breathing are must before extubation.

CONCLUSION

Meningomyelocele is the commonest congenital anomaly of CNS and major cause of serious developmental disability. MMC repair is a challenging surgery for the anaesthesist in many ways. Proper positioning, temperature regulation, fluid maintenance, and adequate reversal are essential for better outcome. Therefore, the role of preoperative preparation, vigilant I/O monitoring and anticipating post operative complications cannot be overemphasized.

REFERENCES