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Letter to Editor

Anaesthesia Section

Use of Different Sizes of Head-Ring for Positioning During Induction of Anaesthesia in Paediatric Spine Surgeries

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Sir,

Spinal surgeries are quite common in children of all age groups. Most of the spine surgeries are performed in the prone position. An anaesthetist faces most of the difficulties during induction of anaesthesia in a child with spinal mass as it is very difficult to maintain a proper supine position in these patients. There are various methods described in literature to handle such situations, but here we are describing an additional method to maintain supine position in these paediatric patients. In children, spinal surgery is required for a various underlying pathology like congenital defects, primary or metastatic tumours, haematomas, abscesses, trauma, arteriovenous malformations (AVMs) and herniated discs etc. Among these the neural tube defects and their associations (tethered cord, diastematomyelia, and syringomyelia) require surgery on the spinal cord.

All spinal surgeries are done to correct or limit neurological deficit. Positioning during anaesthesia and monitoring, must take consideration of the associated medical problems and age-related pathophysiology. There are various methods to intubate a child with meningomyelocele or encephalocele. Intubation in these cases commonly performed in lateral decubitus position, or with the swelling supported by a doughnut, and even by placing the child's head beyond the edge of the table, supported by an assistant [1]. But paediatric anaesthetists find it difficult to position a child with spine defects (e.g. meningomyelocele, spinal mass etc.,) optimally during induction of anaesthesia. They usually induce the patient either in lateral or supine position. The supine position is often maintained by placing gauze bandages under the patient.

[Table/Fig-1]: Head rings of different shape and size.

Here we are describing an additional method to maintain supine position during induction of anaesthesia in such patients.

To get the proper supine position during induction of anaesthesia, we use either close or open head rings made up of soft material [Table/Fig-1]. We use them below the head and different parts of spine to accommodate the swelling [Table/Fig-2].

After intubation in the supine position, the patient was turned prone for the procedure. Particular attention should be given when placing a child in prone position to avoid life threatening complications [2]. Bolsters should be under the chest and pelvis to avoid abdominal compression otherwise it will impede ventilation, compress vena cava and increase epidural venous pressure and bleeding. Avoid extreme flexion of neck and pressure on the eyes.

[Table/Fig-2]: Putting various size of rings underneath to maintain supine position.

So, a safe and better anaesthetic management can be provided by understanding the pathophysiology and planning the anaesthetic technique accordingly. Hope our alternative technique used for positioning a child with spine defect could be useful to our colleagues.

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