FP73

Myelomeningocele repair with additional layer of thoracolumbar fascia

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Introduction: Myelomeningocele (MMC) is a congenital abnormality of the central nervous system still found commonly in developing countries. Surgical repair is performed to preserve existing function and cover the exposed spinal cord, eliminate cerebrospinal fluid (CSF) leakage and prevent infection. The goals of surgery are to protect the neural elements, to remove excess skin tissue, and to obtain a watertight dural closure to prevent infection without exacerbating neurological deficits. A trend in Myelomeningocele defect repair involves soft tissue closure with muscle and fascial flap techniques to provide a durable, protective, and tension-free soft tissue covering. We propose that composite tissue closure yields superior outcomes regardless of defect size. Wound closure is accomplished in most cases of Myelomeningocele (MMC) by undermining of the skin edges surrounding the defect. However, large defects cannot be closed reliably by this simple technique. Due to the technical challenge associated with MMC, surgeons have devised different methods for repairing large defects. In this paper, we report our experience of managing lumbar defects.

Materials and Methods: Study was conducted in Neurosurgery Department in Liaquat University Hospital Jamshoro in 2 years; patients were admitted in ward from the OPDs, Pediatrics ward, all the patients with basic blood laboratory investigation, MRI of lumbar spine, U/Sound of brain, x-ray Chest, with G/A fitness then processed for surgery, Before surgery patient remain NPO for 3 hours with maintain I/V line, Post-op patient remain in close observation for the fever and 100cc blood were transfused.

Result: Patients in this study were in the age range of 2 days to 5 years. Among them 50 were boys and 32 were girls. The most common location of MMC was in the lumbosacral area. Thoracolumbar fascia closures were used in all cases; there were good results for the Thoracolumbar Fascia, among 2 were with CSF leakage, 1 with wound infection.

Conclusion: The Thoracolumbar fascia is used to reinforce tenuous spinal cord and dural repairs in the Myelomeningocele patient. This method provides a secure and watertight closure over the primary repair of the Lumbar defect, may help to prevent potential cerebrospinal fluid leaks, and adds an additional autologous tissue layer to standard skin or muscle flap repairs.