

Use of the bovine pericardial patch and fibrin sealant in meningocele closure.

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Abstract:

BACKGROUND: Meningocele is the most common and complex birth defect of the central nervous system. The operative principle of meningocele repair consists of consecutive separate closures of the neural placode, dura mater, lumbar fascia, subcutaneous layer, and skin. While the neurosurgical techniques for the closure of the neural placode and dura mater have been well accepted, the most appropriate soft tissue closure technique has not yet been applied.

METHODS: This study reviews a case series of eight meningocele patients treated with the bovine pericardial patch and fibrin sealant. Following the reconstruction of the neural placode and the closure of the dura mater, soft tissue coverage was achieved using the bovine pericardial patch and fibrin sealant.

RESULTS: In this series of eight patients, stable coverage was achieved with the application of a bovine pericardial patch and fibrin sealant technique. After the operations, none of the possible complications such as cerebrospinal fluid leak, seroma, hematoma, skin necrosis, deep or superficial infection, and wound breakdown was observed.

CONCLUSIONS: The usage of the bovine pericardial patch and fibrin sealant technique at the fascial level-between the dural sac and the skin-provides adequate soft tissue coverage in meningocele repair surgery.