

Minimally Invasive Decompression Preserving Posterior Muscular: Surgical Management of Type I Chiari Malformation

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INTRODUCTION: Type I

Chiari malformation is a frequent neurosurgical entity that presents in most of cases with affection of cerebrospinal fluid circulation and spinal tracts. Therapy of choice is decompression achieved by performing a suboccipital craniectomy and cervical posterior osteotomies with durotomy and duraplasty. Traditional approaches have an increased risk of bleeding and post-operative pain; they also disrupt the the posterior cervical muscular-ligamentous tension band which affects spinal biomechanics.

Methods

We sought to describe a new minimally invasive approach through a small suboccipital incision without lesion to the posterior cervical muscles and ligamentum nuchae while obtaining optimal decompression margins, performing adequate repair of the dura mater, and reducing perioperative morbidity. Eleven surgical cases are presented to illustrate the procedure.

Learning Objectives

to describe a new minimally invasive approach through a small suboccipital incision without lesion to the posterior cervical muscles and ligamentum nuchae while obtaining optimal decompression margins

An occipitoatlantal decompression was performed through an transverse incision above the occipital hair insertion line











PERSULTS 11 MEAN OPERATIVE TIME 145 5 minutes MEAN OPERATIVE TIME 140 5 minutes MEAN ESTIMATED BLOOD LOSS 120 9 cc MEAN LENGTH OF STAY 24 hours MEAN LENGTH OF STAY 2.7 OPERATIVE TIME 1 CASE (CSF FISTULA) ADREDIDITY 1 CASE (CSF FISTULA) ADRIATIVE 0

Conclusions

A minimally invasive approach to the craniocervical junction is feasible in order to preserve as much normal anatomy as possible to avoid alterations in spinal biomechanics. This work presents a novel procedure which can help to reduce operative morbidity and mortality as well as promoting earlier recovery in patients with Chiari I malformation.



References

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