

Introduction

We reported two cases of parafalcine meningioma, using a full neuroendoscopic contralateral longitudinal fissure approach to completely resect meningioma through the falx cerebri. We believe that under neuroendoscopy, this approach can be used to completely remove the parafalcine meningioma using retractorless surgical technique.

Methods

One case was a 50-year-old female with a right anterior cerebral parafalcine meningioma and edema. Her left limbs had milder sensations of temperature, tactile and pain than the right side, muscle strength was grade IV, and Babinski sign was positive on the left. Head CT and MRI showed a mass effect on the right frontoparietal with edema. The other case was a 62-year-old female with a parafalcine meningioma on the right frontoparietal, muscle strength was grade V, and Babinski sign was negative on the left. Head CT and MRI showed mass effect on right anterior cerebral with edema.

Results

The patient was in supine position and the head was rotated 20 degrees to the opposite side. A neuronavigation was employed to perform a precise surface localization of parafalcine meningioma. Under neuroendoscopy, a contralateral craniotomy and a longitudinal fissure approach were followed by an incision of dura to expose arachnoid, then arachnoid was separated until falx cerebri along its surface. Neuronavigation was employed again to precisely locate the projection of meningioma in the contralateral falx cerebri. According to the position, firstly removed the invaded falx cerebri, blocked the blood supply of the meningioma, and then completely resected the meningioma without retraction of normal brain tissue using Simpson Grade 1.

Conclusions

This report initially explored a full neuroendoscopic contralateral longitudinal fissure approach to complete resect parafalcine meningioma via falx cerebri using retractorless surgical technique. This approach can reduce the retraction of normal brain tissue to enhance protection of brain function, while maximizing the total resection rate of parafalcine meningioma and

Learning Objectives

The development of modern neuroendoscopy technology, using its slimness, closed observation and multi-angle observation, can maximally enhance the advantages of retractorless surgical technique, and provide a minimally invasive surgical method for surgical resection of meningococcal parafalcine meningioma.

References