

Introduction

WHO grade II and III meningiomas of the spinal cord is an extremely rare variant, which shows a higher rate of recurrence. Only few case reports of the clinical behavior and outcome after surgical intervention is presented due to its rarity. This study is to document the clinical features and prognosis of this special group of patients in an institution.

Methods

During the 8 years study period in Beijing Tiantan Hospital from 2008-2015, fifteen consecutive patients with high-grade meningiomas were identified and thus enrolled in this study. The patients' data were evaluated on demographics characteristics, treatment methods, pathology and follow-up data. The prognoses were attained by clinic followed-up and by telephone postoperatively regularly, and recurrence and neurological status were documented.

Results

Fifteen patients were identified for this retrospective study, with 12(80%) female patients and a median(range) age of 39(19-56) years. Tumor distributions were: lumber(n=4, 26.7%),cervical,cervico-thoracic junction,and thoraco-lumbar junction(n=3,20.0% respectively), and thoracic(n=2,13.3%). The median (range) number of affected spinal levels was 2(1-5). Two patients(13.3%) received Simpson I resection, 11(73.4%) received Simpson II resection, and two (13.3%) received III resection. Pathological examination shows anaplastic in 2, and papillary in 1 patient, clear cell type in 3, chordoid type in 1, and atypical type in 8 patients. During a mean follow-up of 64 months(range:26-121 months), mortality was found in 1 patient (6.7%) one month after surgery, and recurrence occurred in 1 patient(6.7%) 2.5 years after the first surgery and received a second surgery immediately. Excellent outcome was achieved in ten cases, three remained stable, and one deteriorated finally.

Conclusions

High-grade spinal cord meningioma is a rare variant of meningioma with a female predominance. Aggressive total resection is the initial treatment goal and should be recommended. Close observation is warranted for patients who have a subtotal resection or who have WHO grade III tumors for they have a high tendency of recurrence(6.7% in our series). For recurrent patients, they can still benefit from the second surgery. However, larger case series and longer follow-up periods is warranted for definitive conclusion.

Learning Objectives

By the conclusion of this session, participants should be able to: 1) Describe the importance of this rare disease, 2) Discuss, in small groups, the clinical outcomes of patients with Who grade II and III meningiomas of the spinal cord treated in our institution, 3) Identify an effectiveness of total or gross-total resection,prognosis and recurrence

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