

Introduction

Cavernous malformation in spine is a rare disease entity and the natural history is limited. Surgical treatment of patients with severe or progressive neurologic deficit is reasonable, but determining the treatment in less severe symptom or asymptomatic patients is difficult due to the limitation of the natural history of this disease. The purpose of this study is to analyze the outcome of patients who underwent surgical treatment and to help determine future treatment strategy.

Methods

This retrospective single-center study identified 27 patients who underwent surgery and diagnosis was verified pathologically between 2000 and 2016. The authors analyzed preoperative clinical history, microsurgical outcome and postoperative neurological outcome (McCormick grade), as well as long-term follow-up.

Results

The mean age at presentation was 40 years, 12 females and 15 males. 11 lesions (41%) were located in the cervical region and 13 lesions (48%) were present in the thoracic spinal cord and 3 lesions (11%) were located in upper lumbar region. 19 lesions (70.4%) were located intramedullary and 8 lesions (29.6%) were located extradural. All patients were symptomatic at

the time of presentation. 20 lesions (74.1%) were completely removed and 7 lesions (25.9%) were sub-totally removed. The mean duration of follow-up from the time of presentation was 44 months. The mean McCormick grade pre-operative was 2.1. Five patients in the immediate postoperative period ought to have been identified the improvement of preoperative neurologic symptoms, 15 patients had no change in symptoms and 7 patients experienced a worsening of symptoms. At the final follow-up, 23 patients showed improvement in clinical course, and 3 patients had no change in neurological symptoms compared with preoperative symptoms, and neurological symptoms continued to deteriorate in one patient.

Conclusions

Considering possible postoperative neurological deterioration of cavernous malformation of the spine will be a feared decision for surgical treatment. However, as has been shown in the present study, the majority of patients experienced postoperative neurological improvement. This study will provide additional information in the treatment of spinal cavernous malformation and will help in the decision of treatment.

Learning Objectives

Identify an effective surgical resection is helpful not only to complete cure of the tumor but also to improve the patient's neurological symptoms

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