Brain Capillary Telangiectasias: Clinical, Radiographic, and Histopathological Features of 6 Cases

Tao Yu MD

Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University, Beijing

Introduction

Brain capillary telangiectasias (BCTs) are usually small, clinically benign, angiographically occult lesions. Large capillary telangiectasias have seldom been reported previously. Symptomatic BCTs are rare, with few reports in the literature. We review the clinical manifestations, imaging, and histopathological characteristics of 6 symptomatic BCTs to further elucidate the diagnostic and clinical features of these vascular malformations.

Methods

6 patients from our single center received surgical treatment and were histologically proven BCTs and/or mixed BCTs and other type of vascular malformations according to WHO classification. This study analyzed all clinical data, including the admission records, clinical records, imaging records, surgical records, postoperative records, discharge records, pathology records and follow-up clinical records.

Results

4 patients were male and 2 patients were female. Mean age at the time of surgery was 17.6 years (range 3 to 36 years). The presenting symptoms included seizure (5 cases) and visual disorder (1 case). The lesions located in frontal lobe (3 cases), temporal lobe (2 case), and temporal-parietal lobe (1 case). Pre-operative MR imaging scans showed lesions to be 2~5 cm in diameter.All cases showed areas of contrast enhancement. Angiography of 3 cases disclosed no abnormal findings. A gross total resection of lesion was achieved in all patients. The histopathological evaluation of the lesions showed cortical gray matter with increased numbers of dilated capillary-type blood vessels, consistent with capillary telangiectasias. In two cases, there were no other type vascular malformations. In other 4 cases, the AVM, cavernous malformation, and venous malformation were disclosed by pathological examination. The status was good or moderate in all patients in 1~5 years follow-up period.

Learning Objectives

By the conclusion of this session, participants should be able to: 1) Know how to make a diagnosis of BCTs, 2) Discuss, in small groups, why symptomatic BCTs is very rare, 3) Identify the difference of pathology between BCTs and other vascular diseases

References

Tang SC, Jeng JS, Liu HM, Yip PK: Diffuse capillary telangiectasia of the brain manifested as a slowly progressive course. Cerebrovasc Dis 15:140–142, 2003

Conclusions

BCTs are usually small vascular malformations that rarely cause symptoms. On MRI large BCTs are often misdiagnosed as AVMs or glial tumors. These cases highlight that BCTs can cause symptoms, a finding that may actually be related to the size of the lesion.