SUBARACHNOID HAEMORRHAGE DUE TO A SPINAL TUMOUR

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ABSTRACT

A 14 year old patient admitted to the neurosurgical clinic as subarachnoid haemorrhage (SAH) is discussed. After diagnostic procedures which included the cerebral digital substraction angiography (DSA) and myelography, it was seen that the cause of the SAH was a mass lesion at thoracic (Th) 12 level. Histological examination revealed that the tumour was a neurilemmoma. In the light of this the pertinent literature was reviewed.

KEY WORDS:

Subarachnoid haemorrhage, Neurofibroma, Spinal neurilemmoma, Cauda equina.

INTRODUCTION

The incidence of schwannoma varies between 16-41% among spinal tumours (3,6). Although, spinal tumours cause radicular pain and some somatic and sensorial neural deficits at the distal levels of the lesion, it is known that occasionally they can be cause of SAH.

On the other hand, among the spinal lesions which cause SAH, there is a very low incidence of spinal tumours varying between 3.5% (3,5,13,16,22,24). Spinal arteriovenous malformations (AVMs) and glial tumours are more common cause.

CASE REPORT:

A 14 year old male patient complaining of headache, nausea and vomiting for five days was admitted to the clinic. His pain had sudden onset and was localised to the neck. There was no unconscious period. He began to vomit with the onset of pain. From the medical history, it was learned that the patient had a similar attack a year ago and had been hospitalized. After examination he was discharged to perform a cerebral DSA. But during this period since the patient’s complaints regressed, he had not gone to the DSA.

On examination he was cooperative and oriented. Cerebral nerve and sensorimotor finding were normal except for neck stiffness and Kernig’s and Brudenzky’s sings.

As CT scan was normal, a lumbar puncture (LP) was performed. The cerebrospinal fluid (CSP) was haemorrhagic, and protein content was 216 mg/100 cc. The patient was hospitalized with the diagnosis of SAH to investigate the aetiology.

Cerebral DSA planned and performed on the sixth day of the SAH and showed no pathology. Spinal myelography showed a regular contrast defect at the level of the Thoracic 12 vertebrae (Fig.1). In the light of this finding, myeloCT scans of that level revealed a lesion at the region of the conus medullaris (Fig.2A-B).
The patient underwent the surgery. At operation, the intradural extramedullary tumour which was connected to the filum terminale, was removed totally, by laminectomy of Th12.

The postoperative period was uneventful and histological examination revealed Neurilemmoma (Fig. 3A-B). The patient was discharged fully recovered and follow-up examination at the third month was normal.

**DISCUSSION**

In general, spinal tumours are recognized by neurological deficits below the level of the lesion (6). Andre-Thomas (1) first discovered that spinal tumours can sometimes cause SAH. Walton (24) reported an incidence of 1.5% for SAH of spinal origin. Sahs et al. (22) in their cooperative study of 6368 patients, gave an incidence of 0.05% and Halpern et al. (13) found the incidence was 0.6%. Fearnside and co-
workers (6) found only 1 (1.4%) of their 70 patients with spinal tumour had SAH. We found only 1 patient (1.4%) with SAH among 68 spinal tumour patients at our neurosurgery clinic.

Ependymoma was found to be the cause of spinal SAH in 50% of patients (5,6,9,10,11,14,21) followed by neurofibroma and schwannoma (1,3,5,6,9,13,19). Other tumours such as astrocytoma and meningeal sarcomas were seen less frequently (5,6,17,23).

In the literature, Bruni et al (3) fond only 14 SAH cases due to neurofibroma including their own cases. Among these 14 patients, four had neurofibroma (2,3,13,20), and the others were schwannoma (1,3,4,5,7,8,12,15,18,19). When the findings of our patient compared with those 14 patients, we found a similarity except that a rebleeding history in our patient.

In general, when a SAH case is examined, attention must be given to the clinical presentation of the patient. First of all, the medical history of the patient must be analyzed in detail. Generally, as cerebral SAH patients complain of severe headache localized to the forehead, spinal SAH patients describe their pain in the neck or back region. Our patient was complaining of pain especially in the neck.

In addition, although, four vessel cerebral angiography is performed for SAH patients routinely, our opinion is that the spinal aetiology can not be investigated adequately. So, idiopathic group of SAH has become as great as 10 percent (3,9,16,21). But now, especially in spinal diagnostic studies, since the development of water soluble contrasts and magnetic resonance imaging, the incidence of idiopathic SAH will decrease.

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