

Incidental Intracranial Tumor: A Case Report

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Abstract

This is a case report of 30 years lady referred by the investigation authority to the medico-legal institute in Baghdad as a car accident victim for postmortem examination. A prior autopsy history with her relatives was negative. During autopsy a large intracranial tumor was discovered at the base of the brain.

Histopathological examination revealed the diagnosis of meningioma.

Keywords: Intracranial tumor, meningioma, autopsy, brain tumor.

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Introduction

Tumors of the CNS have a unique characteristics that other neoplasms else where in the body don't possess. The distinction between benign and malignant types are less evident with limited regain of neurological functions after surgical resection as well as their fatal capability depends on anatomical site irrespective of histological type ⁽¹⁾. Glioblastoma multiforme is the most common malignant adult brain neoplasm, occurs most frequently in the 5th and 6th decade of life ⁽²⁾.

Meningiomas are the most common benign primary brain tumor discovered incidentally more frequently in elderly persons ^(3, 4). They comprise 20% of all intracranial tumors in adults ⁽⁵⁾.

They arise from the meningiothelial cells of the arachnoid and vary in their size from a pinhead to the size of a man's fist depending on their location, type of growth and growth rate (mostly slowly growing tumors) ⁽⁶⁾.

Meningiomas are occasionally discovered as incidental findings on CT scan or MRI ⁽⁷⁾.

Most meningiomas remain asymptomatic throughout life which explains why 50% of all meningiomas are discovered at autopsy ⁽⁸⁾. They are commonly seen in individuals between 3rd and 6th decade of life with female to male ratio 2:1 ⁽²⁾. Most common sites of involvement include parasagittal aspect of the brain convexity, dura over the lateral convexity ⁽¹⁾ and wing of the sphenoid ⁽⁹⁾.

Symptoms of the tumors depend on their location, type and rate of growth. They can be highly fatal if they are very large or causing increased intracranial pressure, severe cerebral edema or herniation ⁽²⁾.

Sometimes they can reach an enormous size while producing minimal symptoms especially in the frontal lobe ⁽⁵⁾.

Objective of this case study

To draw the attention for the presence of some silent and sometimes serious brain pathology and the importance of full investigation even in minimal symptoms.

Case Study

This is a case report of a 30 years old single female brought by the police to the medico-legal institute in Baghdad as a car accident victim. Information regarding the circumstances of her death was gained from the police report as well as from

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an interview with her brother who denied any previous medical or surgical history of the deceased.

External examination of the body revealed multiple brush abrasions 1-7 cm in diameter on the anterior right side of the chest and on the external aspects of her upper limbs. A bruise was seen on her upper abdomen of about 10 cm in length.

Dissection of the scalp reveals no abnormal findings.

After removing of the calvarium the brain was seen slightly edematous with congestion. On trying to remove the brain a big mass was noticed at the base of the brain on the left side of the anterior cranial fossa. After removing the brain from the skull the mass was excised. A compression effect by the mass was seen on the basal aspect of the left frontal lobe and to lower extent the temporal lobe.

The Base of the skull was normal.

Evisceration of chest organs was done. Examination of the chest cage showed fractures of the 4th, 5th, 6th, 7th ribs of the right side along the lateral axillary line with bruises at the

fractures sites. Right lung showed multiple bruises 5-7 cm on the 3 lobes. A huge abdominal collection of blood intraperitoneally was collected and measured to be almost 3 liters. Multiple tears were seen in the liver which explains the source of blood. Other abdominal and pelvic organs were normal.

Gross examination of the brain mass showed a solid vascular growth weighting 60 gram measuring 5x3x2 cm, hemispherical in shape.

Fixation of the mass was done using 10 % formalin over night.

Histopathological examination using H & E stain revealed transitional type of meningioma. Interrogation with the deceased brother after completion of autopsy examination and facing him with the brain pathology seen during autopsy, he admitted that she was complaining from some symptoms like headache, blurring of vision, mental loss and occasional seizure attack for which she was on antiepileptic medications.

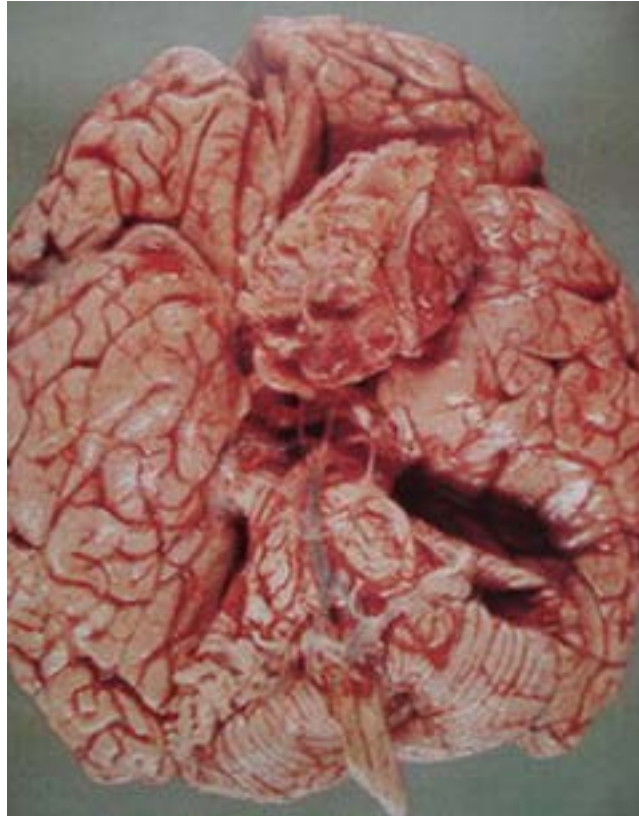


Figure 1: Brain, basal view showing large meningioma at the base of the brain.



Figure 2: Brain, basal view, showing compression of the underlying structures by the tumor.

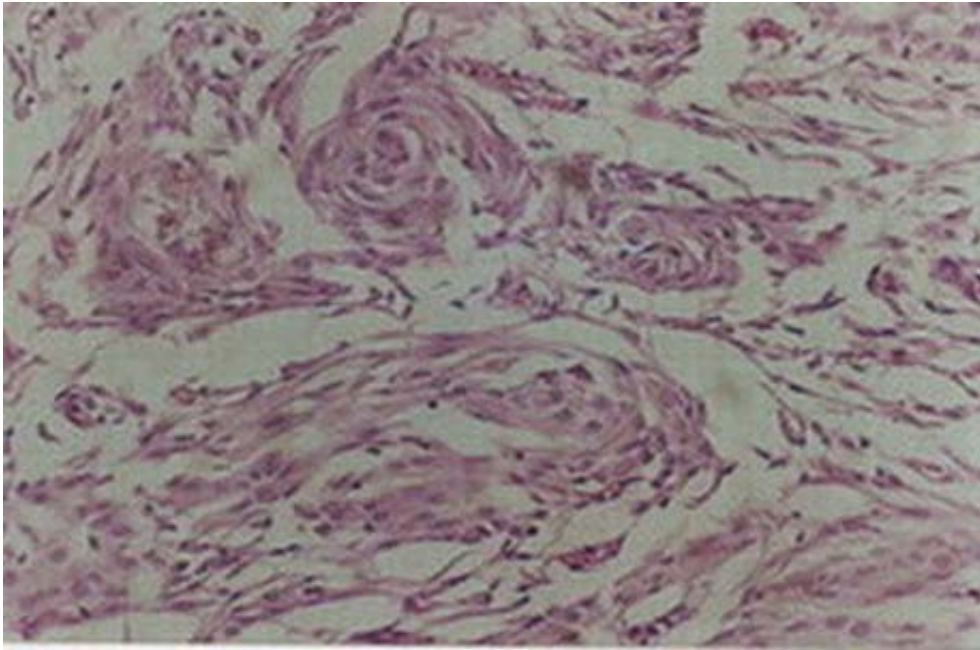


Figure 3: Section from the tumor tissue stained by H & E stain shows whorls of transitional meningotheilium (X 40).

Discussion

Brain tumors can affect people of all ages. Meningiomas are benign slowly growing encapsulated highly vascular intracranial tumors^(10, 11). In the current study the age and sex of the deceased coincide with their comparable parameters in previous studies which stated that meningiomas affect mostly between 3d and 6th decade of life more frequently in the age 21-30 years with predilection to female^(2,5,6).

Incidental detection of meningioma is more frequently in elderly people than in young people because of the process of brain atrophy as well as calcification of the tumor which lessens the rapidity of growth⁽³⁾.

In general meningiomas remain asymptomatic throughout life which explains why 50% of all meningiomas are discovered at autopsy^(8, 12).

In this study the victim was complaining of some neurological symptoms during her life which forced her to consult a doctor who gave her

medications probably without thorough investigations like CT scan or MRI. Those symptoms arised as a result of pressure effect of the tumor on the basal aspect of the frontal lobe as well as the temporal lobe until she died by a road traffic accident.

As far as the site and the size of the tumor are concerned, neither of them were so serious as to cause her death in my opinion as it was reported previously that the size can reach to an enormous one while clinically producing minimal symptoms specially in the frontal lobe⁽⁵⁾ as it was in this study, nor the site was as serious as meningioma of the cerebellopontine angle.

Acknowledgment

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