



EPENDYMOMA OF LATERAL VENTRICLE IN 23 YEARS OLD FEMALE – A CASE REPORT

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ABSTRACT

Ependymomas are the tumors that most commonly arise next to the ependyma-lined ventricular system. Ependymomas account for about 2–6% of CNS tumors and 60–70% of spinal.^[1] Among the ependymomas, supratentorial tumours are rare ones. These are more common in children < 3 years of age. In adults, ependymomas are common in spinal cord. This report presents a 23 years old female with ependymoma of the left lateral ventricle.

INTRODUCTION

The WHO classification of ependymal neoplasms encompasses four groups: ependymoma and variants such as cellular, papillary, clear cell and tanycytic ependymoma (WHO grade II), anaplastic ependymoma (WHO grade III), myxopapillary ependymoma (WHO grade I), and subependymoma (WHO grade I).^[2]

Ependymomas are the most common primary intramedullary spinal cord tumors and consist 30-40 % of the cases.^[3,4] Although they may be encountered in every age group, they peak between the ages of 0-4 years and between 55-59 years.^[5]

MPEs were first described by Kernohan in 1932.^[6]

In the present case report, we diagnosed a case of ependymoma of lateral ventricle on autopsy and histopathology of the brain in a 23 years old female.

CASE REPORT

A body of 23 years old female was brought to us by police in the month of January of 2020. She had come from Chandigarh to Shimla on a trip with her friends. The deceased had chronic history of headache for the last 1 year. They booked a room in a hotel at Shimla. They were visiting various tourist spots nearby. While she was enjoying the trip, she developed sudden severe headache and her friends took her back to the hotel. They gave her some painkiller but she did not get any relief. They all decided to go back to Chandigarh. When they were on their way back, she started to feel dizzy and they decided to take a room and to rest for some moments there. She suddenly fell unconscious and they brought her back to

the tertiary care institution where she was declared brought dead. The body of the deceased was kept in the mortuary for post-mortem examination.

On the next day, the body was brought by the police to the Department of Forensic Medicine for post-mortem examination.

External Examination

Well built female body of length 5 feet 5 inches wearing white sweater with black dots, maroon coloured sweater, off white coloured brassiere, black trouser and black underwear.

There was no evidence of any injury over the body.

Rigor mortis was completely developed over all joints of body.

Hypostasis reddish-purple, confluent, fixed present over the back and posterior aspect of neck, upper and lower limbs.

Body had cooled down to room temperature.

No evidence of ligature mark was present externally.

Internal Examination

Trachea: congested and empty.

Lungs: congested and grossly oedematous. Heart: the weight was 168 grams.

Stomach: congested and was containing 20 cc of yellowish fluid with no atypical odour. Small Intestine: congested.

Large intestine: congested and was containing minimal fecal matter. Liver: congested
Spleen: congested Kidneys: congested
Urinary bladder: congested and empty. Genitalia:
External: Normal
Internal: Uterus was normal and the uterine cavity was empty.

Brain: grossly oedematous.

The weight of the brain was 1860 grams. Duramater was tense and shiny.

The gyri are flattened and sulci are filled.

The brain of the deceased was preserved in 10% neutral buffered formalin and sent for histopathological examination to the Department of Pathology.

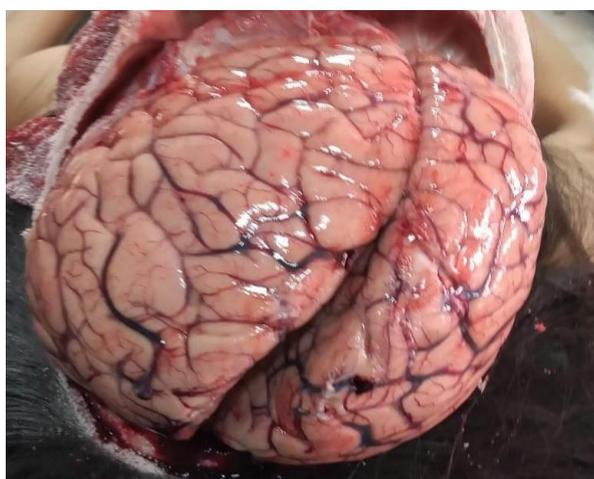


Image 1: Showing grossly oedematous brain with flattened gyri and filled sulci.

The viscera of the deceased was preserved and sent to Forensic Science Laboratory to rule out poisoning/intoxication.

HISTOPATHOLOGICAL EXAMINATION REPORT

Gross findings

Outer Surface: meninges were congested. No hemorrhages seen.

Cut surface: Dilated ventricles with friable tan- brown mass measuring 1.2 cm x 1.2 cm on the left lateral ventricle wall in the posterior one-third part.

Surrounding brain cortex, frontal, parietal, temporal, occipital, cerebellum & medulla is unremarkable.

All identified vessels are grossly unremarkable.

Microscopic examination

Meninges are congested, with no other pathology.

Frontal lobe reveals presence of interventricular hemorrhage along with thrombus with cholesterol clefts, giant cell (foreign body type) reaction & periventricular hemorrhage surrounded by hemosiderin laden macrophages, lymphocytes, plasma cells & adjacent neuronal degeneration in the posterior one-third of left

lateral ventricle.

Ventricles show congested choroid plexus vessels along with a focal tumour composed of monomorphic moderately sized cells with round to oval nucleus, salt and pepper chromatin arranged in perivascular pseudorosettes and also seen focally invading the normal cortex near the interventricular hemorrhage.

No evidence of necrosis/ calcification seen in sections studied.

Parietal, temporal, occipital lobes, cerebellum and brain stem are microscopically unremarkable.

Comments: Features are of Ependymoma- left lateral ventricle probably leading to Intraventricular hemorrhage and chronic periventricular cerebral infarct- left lateral ventricle probably leading to ventricular obstruction, increased intracranial pressure and finally death.

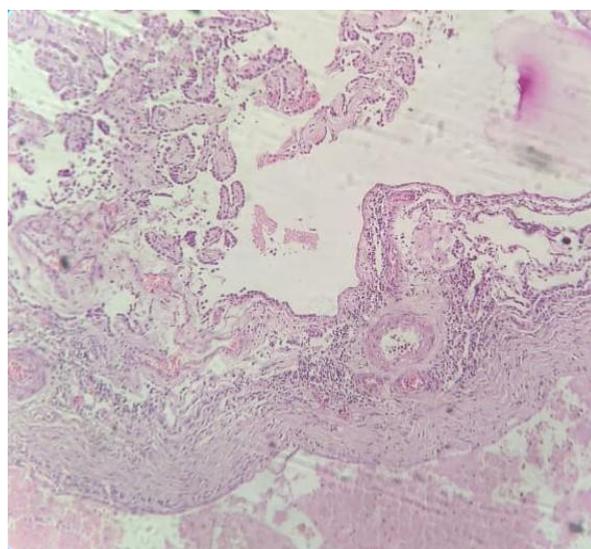


Image 2: Ependymal canals and perivascular tumour infiltrate (10x).

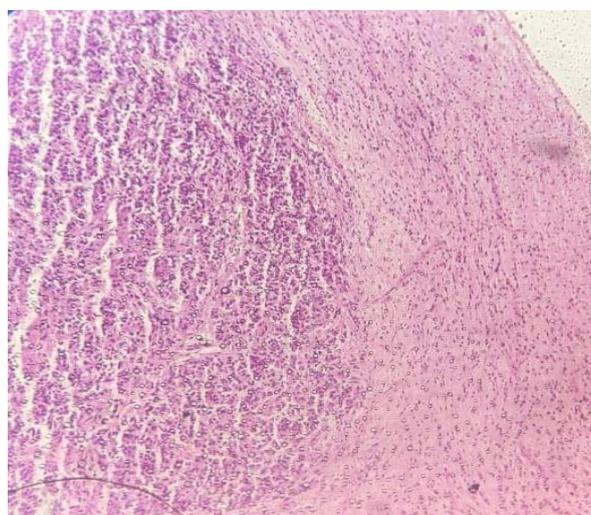


Image 3: Tumour cells invading normal brain parenchyma (10x).

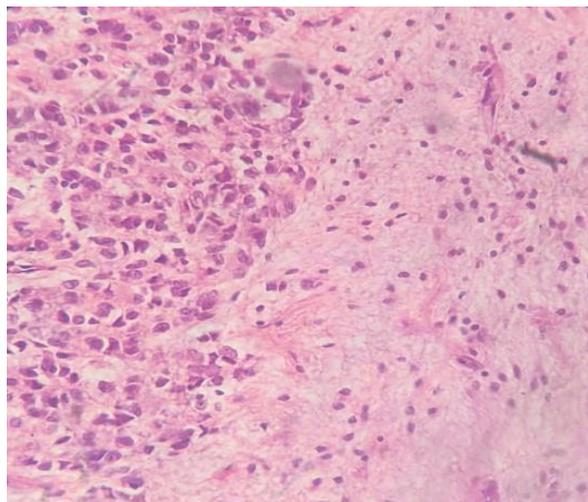


Image 4: Tumour cells invading normal brain parenchyma (40x).

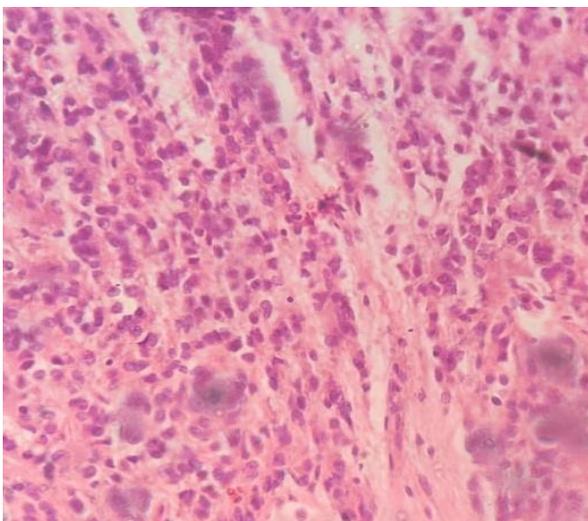


Image 5: Perivascular pseudorosettes (40x).

FORENSIC SCIENCE LABORATORY REPORT

No poison/ alcohol was detected in the chemical examination of the deceased.

CAUSE OF DEATH

Gross cerebral oedema secondary to Ependymoma- left lateral ventricle probably leading to Intraventricular hemorrhage and chronic periventricular cerebral infarct- left lateral ventricle probably leading to ventricular obstruction, increased intracranial pressure and finally death.

DISCUSSION

Ependymomas are primary glial tumors that arise from cells related to the ependymal lining of the cerebrospinal fluid circulatory system.^[7]

According to the latest histopathological classification of WHO in 2016, ependymoma was classified into three grades.^[8] Grade I: subependymoma and myxopapillary ependymoma; Grade II: papillary ependymoma, clear cell ependymoma, and tanyctic ependymoma; Grade II-

III: ependymoma, RELA fusionpositive; Grade III: anaplastic ependymoma

Representing 2% to 9% of all neuroepithelial tumors^[9] it may manifest at all ages, affecting more frequently children and young adults^[10] with no gender predilection.^[9] Ependymomas can appear in any site of the craniospinal axis, even outside the ventricular system, however, they're more frequently located in the cervico-thoracic segment of the spinal central canal and fourth ventricle^[9] and only a third are supratentorial.^[11]

This case represented a 23 years old female with Ependymoma left lateral ventricle which is very rare. The diagnosis was made on the basis of histopathology report of the brain preserved at the time of autopsy. She was suffering from headache for the last 1 year but she ignored it. Had the diagnosis been made during her life, she could have been saved through various treatment modalities. Someone has rightly said "Ignorance is an enemy, even to its owner".

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