Space Occupying Lesion- Uncovering the Hidden Pathology of the Brain: A Case Report

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Abstract

Sudden deaths as a result of undiagnosed primary intra-cranial lesions are the rarest of rare. A brought dead case of 32-year-old female with past history of headache without any clinical diagnosis was found to be the case of "transitional meningioma with focal rhabdoid differentiation which is histo-pathologically classified as WHO Grade 1 intra cranial lesion[1]. A complete autopsy including gross findings, internal findings with histopathology and immuno-histochemistry can help us to diagnose the missed pathology to conclude the cause of death. It will also give the idea about autopsy-based statistics of these rare intra-cranial lesions which would help us to focus the cases with the history of headache to diagnose early with interventions and investigation including MRI or CT scan during life.

Key words: *Transitional meningioma, headache, intra cranial lesions, space occupying lesion.*

Introduction

Meningiomas are the most common primary intra cranial tumours seen now-a-days with an emerging trend in the middle age group individuals. It comprises 36.6% of all the primary intra cranial tumours[1]. Meningiomal tumours incidence are quite age dependent as most commonly seen in two extremes of ages i.e., in between 0-19 years and also in between 75-84 years[2]. However, in our case report we are reporting a case of "Transitional meningioma with focal rhabdoid differentiation (WHO Grade 1) as per the histo-pathology report.

Case report: On 5th of October 2018, the 32-year age female, presented to emergency with the past history of many episodes of projectile vomiting with severe headache and she was not under treatmentdue to low socio-economic status and also due to intermittent relief in symptom with some home remedies. There was no history of trauma or any kind medication during her life. After receiving the patient in casualty of AIIMS, Bhubaneswar, Medical Officer declared her as brought in dead on the same day at 09:05am.

External examination:Complexion isfair. Face isnormal. Mouth is close.Tongue is inside oral cavity. Teeth are intact and 16/16.Scalp hairs are black in colour and of length 20-25cm. Eyes are half open, tache-noire is seen in both the eyes. Pupils are dilated. Nail beds are bluishin colour. Natural orifices are intact and free. Toe rings and anklets silver colour in both side feet.There are 4 red and golden colour bangles in both hands.

Internal examination: -

Gross findings:In general, all the visceral organs were intact and congested showing the asphyxial features. Endo-tracheal lining was intact and congested without any presence of foreign matter in-situ. The stomach was containing 100ml of yellow coloured mucoid fluid without any characteristic odour showing mucosal congestion but no sub-mucosa haemorrhage was present.

On cut sectioning of brain, the growth of mass was inward towards the brain as discrete, well defined dumbbell shaped space occupying mass which was lying in an area covering right parieto-occipital lobe. The mass was white in colour with the size of (5x4x3)cm

and weighs 100gms.The border between the mass and brain was smooth and clear with distinct demarcation as the structure was encapsulated by tumour capsule and surrounded with cerebrospinal fluid.

Microscopic findings: On microscopic sectioning the mass was showing well circumscribed and encapsulated tumour comprises predominantly of spindle shaped cell arranged in fascicles and whorled pattern. Focal syncytial arrangement of cells was also seen. The cells have fine nuclear chromatin and moderate cytoplasm. Occasional foci of rhabdoid differentiation also noted. Focal microcystic changes were also observed. Mitotic activity of 1-2/10hpf was noted without any necrosis.

Discussion: Meningiomal mass are usually slow growing infiltrative lesions that is why it is mostly diagnosed incidentally on brain imaging or during autopsy[3]. It has an insidious symptomatic onset, while there may be no gross or specific presentation of meningioma, initially patient usually present with the symptoms of headache due to increased intra cranial pressure with progressive focal neurological deficit in later period following initial symptoms due to its slow progression which includes cranial nerve leading to few episodes of seizures[5]. The most common histological sub-classifications of meningiomas are grade 1 meningothelial, fibrous, and transitional meningiomas[6]. As far as our knowledge, at the time of autopsy without any significant clinical history, this is one of the rare cases presented to us with the mass in the brain with histo-patholgical diagnosis of intra-cranial lesion of grade 1 i.e Transitional meningioma with focal rhabdoid differentiation. Transitional meningiomas carries the features of both the meningothelial and fibroblastic subtypes of histo-patholgical meningiomas[1,6].

FIG 1: Gross Picture of the Space Occupying Lesion During the Autopsy

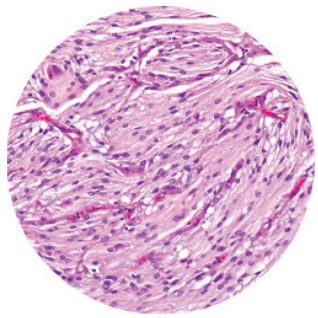

FIG 2: Microscopy of the Space Occupying Lesion shows Transitional Meningioma with Focal Rhabdoid Differentiation WHO Grade-1 (H&E Stained; 40X)

Conclusion

To conclude, this case report is to remind that all the cases with or without external evident mass with just the history of headache should be kept in mind that it could be the case of meningioma as a differential diagnosis which should be address for clinical and diagnostic interventions. It should be obvious to the autopsy surgeonsto send samples of brain for Histopathological diagnosis aftercomplete obscure autopsy.

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Ethical Clearance: Taken from Institution Ethical Committee, AIIMS Bhubaneswar. The identity of the deceased was not revealed in the manuscript.

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