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Colloid cyst of the third ventricle

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Abstract

Colloid cyst of third ventricle is one of the important treatable causes of acute onset hydrocephalus in adults. Delay in diagnosis and treatment may have lethal consequences. We report a case of a 37 year old lady presenting as acute onset hydrocephalus, diagnosed as colloid cyst of the third ventricle. The histopathological features of this rare lesion have been highlighted here.

Keywords

colloid cyst; third ventricle cysts; acute onset hydrocephalus

Introduction

Colloid cysts of the third ventricle are rare intracranial lesions, accounting for 0.2 - 2% of all intracranial mass lesions [1]. Although histological benign, they have life threatening complications. A high index of suspicion combined with prompt diagnosis and treatment is lifesaving. The histopathological features of this rare lesion have been highlighted in this case report.

Case history

A 37 year old lady was brought to the emergency room with history of headache and giddiness followed by loss of consciousness. Emergency MRI brain was done which showed a rounded lesion in the region of third ventricle with moderate to severe obstructive hydrocephalus. She was taken up for an emergency surgery; a right frontal craniotomy was done. A cyst was identified in the third ventricle, blocking the foramen of Munro. There was evidence of raised intracranial tension when the ventricle was tapped. Aspiration of the cyst yielded viscous material. The cyst wall was completely excised. Post operatively the patient recovered completely.

Colloid cysts are rare intracranial lesions with an incidence of 3/1 million per year. Most cases occur in the third to fifth decade of life. Paroxysmal headache, often with postural variation is the most common presenting symptom. They are known to cause acute onset hydrocephalus leading to sudden death [2]. The mechanism of death is still a controversial subject. The cause of death may be brain stem herniation or reflex cardiac effects mediated through hypothalamus [3].

They are found attached to the roof of the anterior part of third ventricle, rarely in the lateral and fourth ventricles. The origin is believed to be from the diencephalic vesicle or from detached paraphyseal rudiment. Neuroepithelial, respiratory and olfactory origins have also been suggested. CT and MRI

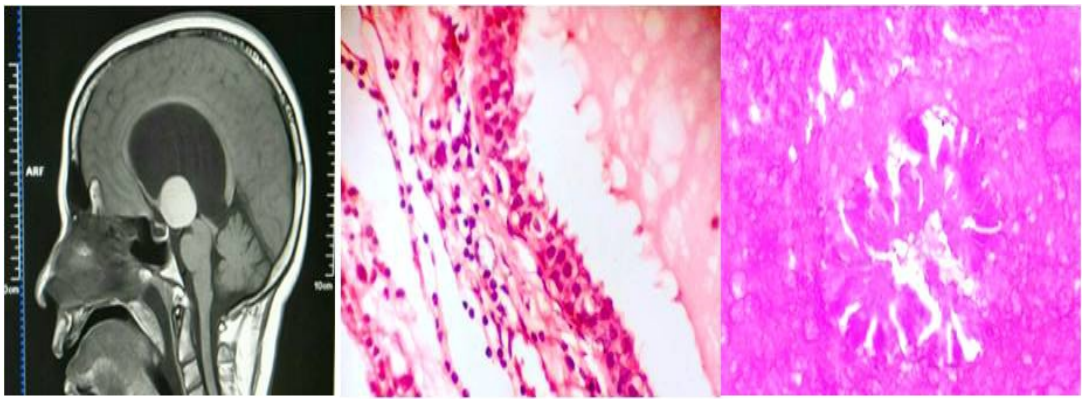
imaging characteristics may be diverse depending on the cholesterol and protein quantity in the cyst contents [3], necessitating histological confirmation.

On histopathology, the ciliated columnar epithelium with goblet cells resting on a fibrocollagenous cyst wall with PAS positive contents is characteristic. The cyst contents derived from the breakdown products of epithelium may condense into hyphae like structures. The differential diagnosis includes ependymal and arachnoid cysts, which can be differentiated by the characteristics of the lining epithelium. Enterogenous cysts, though lined by columnar epithelium, are identified by their lack of cilia. Dermoid cysts have a characteristic midline location with hair and squamous epithelium. Cystic metastases are rare in this location [4].

Conclusion

Benign innocuous lesions in dangerous locations can be lethal. Awareness of the characteristic features of this rare lesion will help in early diagnosis and prompt management.

Figures



A. MRI brain showing rounded lesion in the third ventricle with obstructive hydrocephalus.
B. Cyst wall lined by ciliated columnar epithelium with goblet cells. H & E X 400
C. PAS positive proteinaceous cyst contents condensed into hyphae like structures. PAS X 400

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