CASE REPORT

Transventricular Endosopic Removal of Third Ventricular Hyperdense Cystic Craniopharyngioma

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ABSTRACT

Intraventricular craniopharyngioma, a rare form which is usually a squamous papillary type and CT scan picture shows hypodense lesion. We are reporting an intraventricular hyperdense cystic craniopharngioma in a 6 year old girl which was removed by intraventricular endoscopy. Hyperdense lesions in the ventricle may be due to craniopharyngioma due to their high protein content. These lesions can be better removed with neuroendoscope.

Keywords: *Craniopharyngioma, intraventricular tumors, Neuroendoscopy, Endoscopy, Cyst, Minimally invasive neurosurgery, Neurosurgery.*

INTRODUCTION

The craniopharyngioma, a dysodontogenic tumor is derivative of ectodermal remnants of craniopharyngeal duct and/or Rathke's pouch. Both embryogenic and metaplastic theories are accepted as it origin. Adamantinous type prevalent in children is attributed to developmental and squamous type seen in adults to metaplastic theory. These lesions may be solid or cystic or mixed type.[1] Cyst may be unilocular or mutilocular containing proteinaceous yellow color glittering fluid rich in cholesterol known as machine oil. Other cystic lesions arising from remnants of stomodeum and craniopharyngeal duct are Rathke's cysts[2], epithelial cyst, epidermoid and dermoid cysts.

Craniopharyngiomas my be sellar, suprasellar, sellar and suprasellar; and purely intraventricular. Intraventricular craniopharyngioma is rare and it is usually squamous papillary type (metaplastic). It may be approached by microsurgical transcallosal route or by endoscopy.[3,4]

We are reporting a case of third ventricular hyperdense cystic craniopharyngioma which was successfully removed by transventricular endoscopy.

CASE REPORT

A girl of 6 years age presented with head ache, and diminished vision, for last six months. She was admitted in a neurosurgical unit somewhere else and underwent a craniotomy but she had no relief. She had become drowsy for last 7 days. On examination her vital were stable and she was afebrile. She had a right frontal craniotomy site bulging out. She had a papilloedema and all the cranial nerves were intact. Signs of meningeal irritation and cerebellar signs were negative.

CT scan brain showed a right frontal craniotomy site bulging out with underlying biventricular hydrocephalus. Periventricular lucency was present and a hyperdense lesion seen inside third ventricle. A provisional diagnosis of colloid cyst third ventricle was made. On endoscopic exploration a brown cystic lesion was seen projecting from the foramen of monro. It was having mottled appearance. Cyst was opened and machine oil like fluid drained. Cyst wall was removed in pieces. Patient developed diabetes inspidus after operation which was managed with vasopressin nasal spray for few days.

Histopathological report revealed as craniopharyngioma squamous variety. Her headache relieved and became alert. Her vision and diabetes inspidus also improved with time.

DISCUSSION

Purely intraventricular craniopharyngioma is rare. It is usually squamous papillary metaplastic type. Yasir

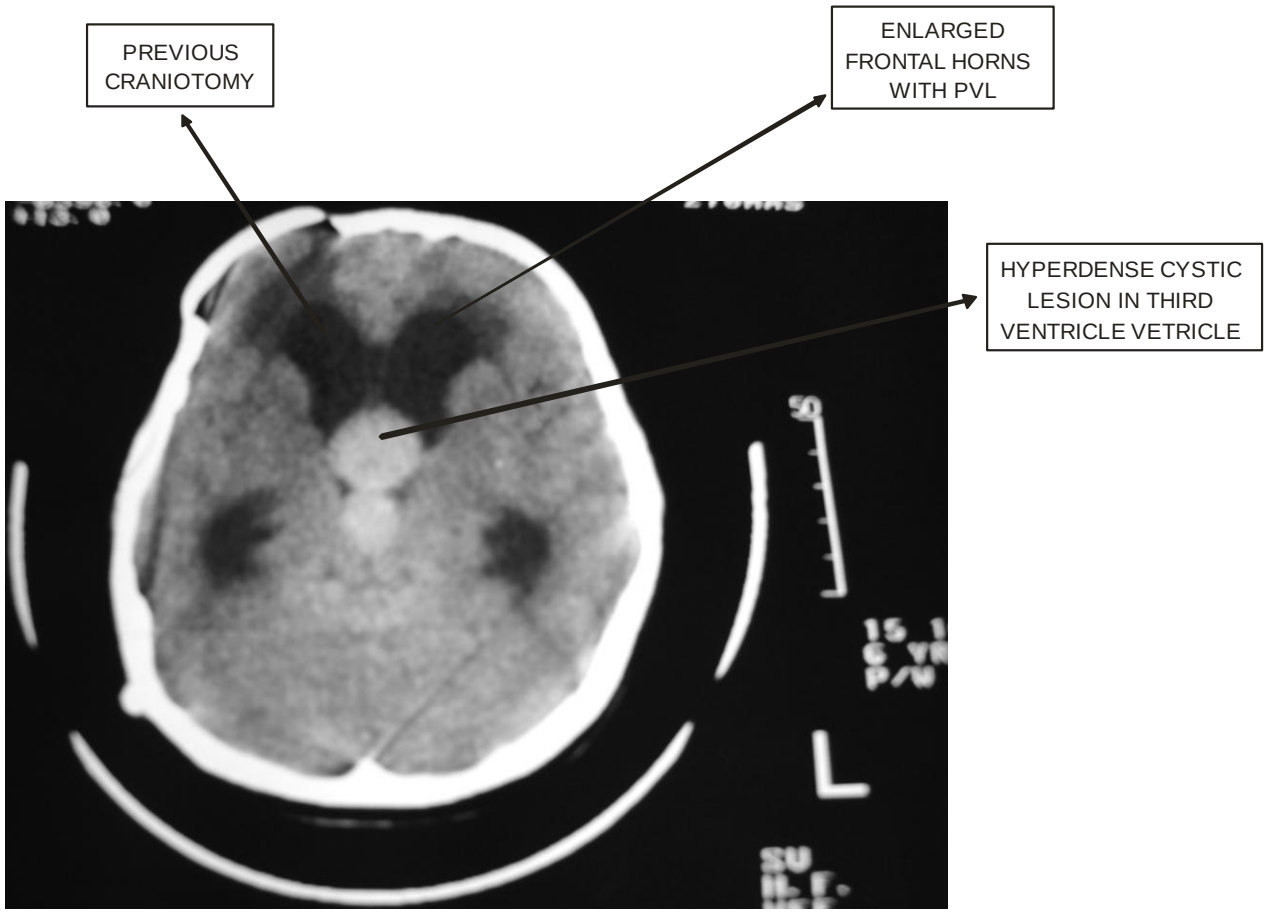

Fig. 1: *CT scan film showing hyperdense cystic craniopharyngioma in third ventricle.*

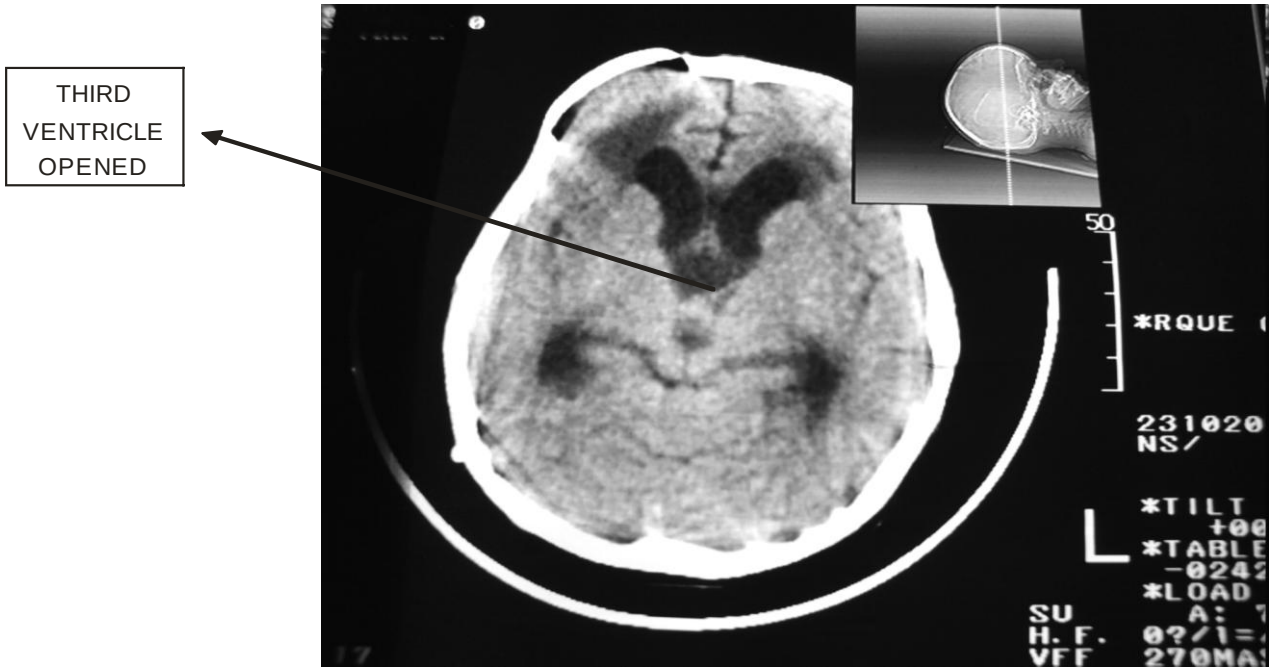

Fig. 2: *Post Operative CT Scan Film Showing Excision of Cystic Lesion in Third Ventricle.*

Gill has classified this type as F type according to their location.[5] It can be approached by transcallosal or endoscopic method. Aim is to removal whole tumor but unrespectable lesions can be decompressed and Ommaya reservoir may be placed endoscopically.[6] These cases may be submitted for gamma knife. Some complex carniopharyngiomas in this location may be resected with combined microsurgical and endoscopic methods.[4]

Authors report a case of cystic craniopharyngioma located in third ventricle (F type of craniopharyngioma). Abdullah and Camaert described 3 patients having type f cysts operated by ventricular endoscopy and 2 of them had recurrence.[7] Craniopharyngiomas are hypodense on CT scan and periphery enhances with contrast. In our case CT scan brain revealed a hyperdense lesion in third ventricle which is unusual in craniopharyngioma and it may be due to high protein content. Similar findings are mentioned by Sridhar in three cases with hyperdense cystic craniopharyngiomas.[8]

We had aspirated contents and excised its wall completely by transventricular endoscopy. Histopathological examination in our case revealed squamous variety of craniopharyngioma. Agarwal et al has reported an intraventricular craniopharyngioma with adamantinomatous histopathology.[9] Temporary Diabetes inspidus was observed in our case which relieved with desmopressin. Baykan et al[10] had diabetes inspidus in five patients in 10 years experience.

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