Case report

Cystic Meningioma

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Abstracts:
Meningiomas are most common intracranial extraaxial tumours, but atypical meningeiomas like cystic meningioma are rare. It is about 2 to 4 % in adults and 10 to 19 % in infants. Because of its atypical presentation a case of cystic meningioma is presented.

Key Wores: Meningioma, Cystic Meningioma., Intracranial Tumour.

Introduction:
Meningiomas are the most common primary intracranial extra-axial tumours and accounts for about 13-18% of all intracranial tumours[1]. These are mostly solid, well-circumscribed lobulated tumours arising from the dura matter. Cystic meningiomas are an atypical form of meningioma with solid and cystic components and account for about 10 to 19% of intracranial meningiomas in infants and children and 2 to 4% in adults[2]. Because of its atypical presentation it is often misdiagnosed as malignant gliomas. Because of its rarity, a case of cystic meningioma, which attended to our institution, is presented and available literature is reviewed.

Case Report:
G.B.R , a male aged 42 years was presented with headache, persistent vomiting and altered sensorium. NCCT showed a mixed density mass lesion over left frontal region with solid & cystic components. There was considerable perilesional edema with shift of falx to right. On CECT there was intense enhancement of solid portion with non-enhancing cystic portions. The cyst walls enhance intensively. The mass had a broad base over falx cerebri, suggesting a meningeal origin. There were intratumoral and peritumoral cysts. A diagnosis of cystic meningioma was made

Discussion:
Meningiomas are common in women in a ratio of female to male 2:1 to 4:1. It may be related to sex hormone[3]. 8% of cystic meningiomas are malignant and 12% are angioblastic in type[4]. Nauta et al classified cystic meningiomas into four groups according to the distribution of cystic components in the tumour mass[5]
Centrally located intratumoral cysts
Peripherally located tumoral cysts
Peritumoral cysts in the adjacent parenchyma
Peritumoral cysts between tumor and adjacent parenchyma.

Rengachasy et al recognized only two types of cysts[6]
Intratumoral cysts
Peritumoral cysts

Whatever may be the site of the cysts, Fortuna et al gave a satisfactory explanation regarding the formation of these cystic changes[7]. According to them Nautia type II & I are the outcome of microcystic degeneration, ischaemic necrosis and/or haemorrhage. Degenerative phenomena such as vascular, myxomatous, mucoid and fatty degeneration play a part in the formation of these cysts which contain yellowish xanthomatous fluid[3].

Transudation and secretary changes with in the tumour tissue may also lead to cyst formation. Nauta type III cysts may be due to reactive gliosis, intense peritumoral odema, fibroblastic proliferation. Nauta tupe IV cysts may be due to mechanical trapping of cerebrospinal fluid[7].

Though a rare entity, cases of cystic meningiomas have been reported from world over. Maj Boguslaw et al[4] reported 3 cases from poland. A 63-year-old

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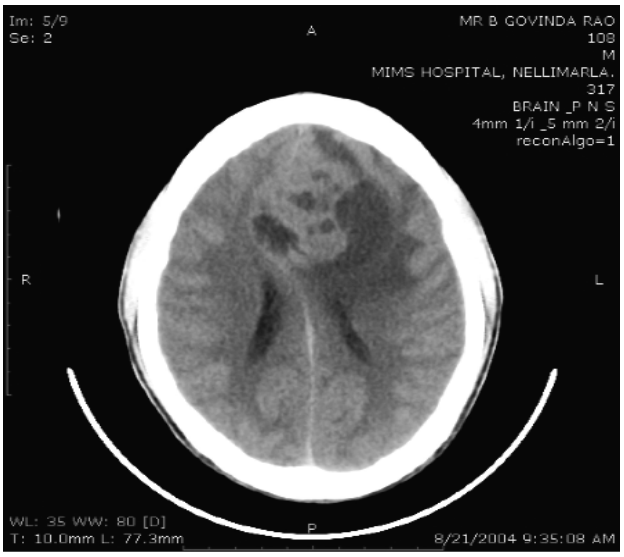

Fig I : NCCT brain shows heterogeneous density mass lesion with areas of solid and cystic component with extensive peritumoral odema. Falx is displaced to right.

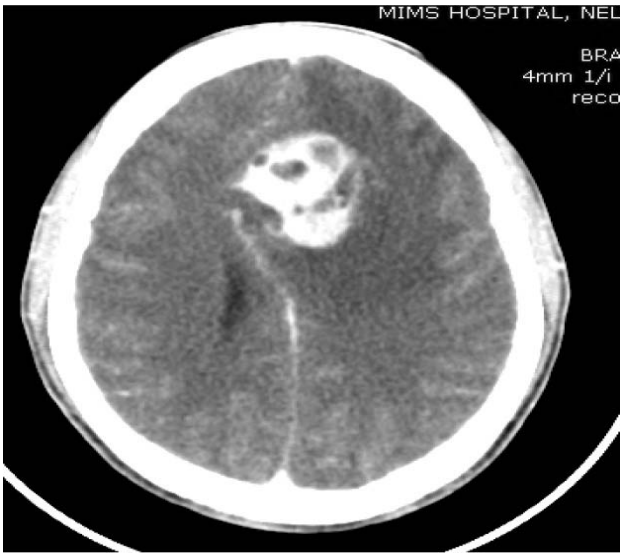

Fig II CECT brain shows intense enhancement of solid portions with no enhancement of cystic components. The cyst walls enhance intensely. There are multiple intratumoral and peritumoral cysts.

man had two separate extra axial tumours in the frontal region of left side. Multicentric origin of meningiomas have been authenticated by Osborn[3]. A 70 year old man had cystic tumour resembling cystic astrocytoma which on biopsy proved to be a cystic meningioma. Another 63year male had diagnosed meningioma on 1996 which developed cystic changes in 1999 probably due to entrapment of CSF. Tatli et al[1] had reported three cased from Turkey. They opined that contrast enhancement of the cyst wall may be a predictive factor for malignant meningiomas. Presence of a dural tail in MRI examination improves the accuracy of diagnosis of cystic meningiomas.

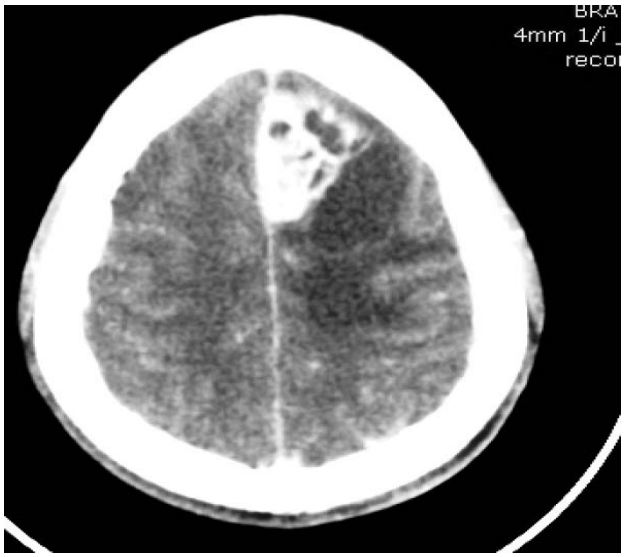

Fig III CECT at higher section shows the broad based mass over the falx cerebri suggesting a meningioma.

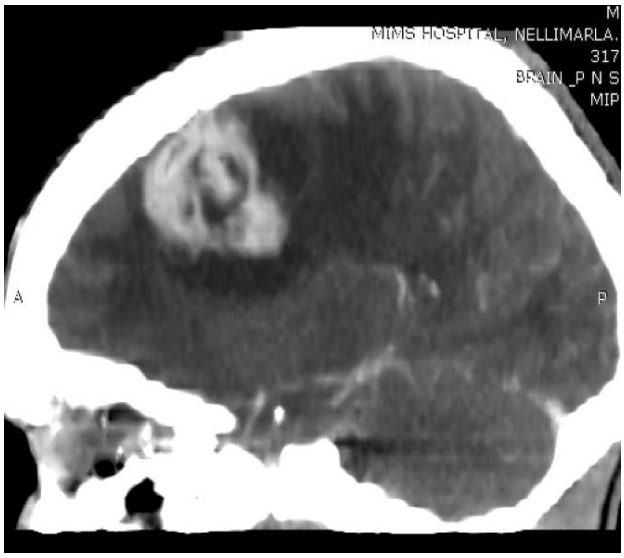

Fig IV shows the tumour in sagital reconstruction

Cho-et al-[2] reported a case of cystic meningioma in a 61year old female with recent onset of seizures and loss of memory of recent events. Radhakrishnan et al[8] had reported two cases from kerala resembling cystic astrocytoma on radiological investigation and intra-operatively , but proved to be cystic meningioma on biopsy. Sharma et al[9] from lucknow reported a case of a 6 month old boy Sridhar et al[10] from chennai had a retrospective study of two hundred thirty two, meningiomas of which 17 were associat-

ed with cysts, which formed 7.3/. Eleven of these tumours had intratumoral & six had peritumoral cysts. They observed peritumoral cysts to be more common in males and intratumoural cysts common in females.

Cystic meningiomas are to be differentiated form cystic degeneration of malignant gliomas, hydatid cyst, metastatic lesions, glioblastoma multifome, haemangioblastoma, xanthochromic astrocytoma. MRI had a diagnostic accuracy of 80% which is significantly better than CT which accuracy rate less than 50%[11-12].

Conclusion:

Cystic meningiomas, though a rare entity, is reported worldwide. Because of its atypical radiological presentation, it poses a diagnostic problem. MRI has an accuracy of 80%, which helps in its proper diagnosis.

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