Giant Intraparanchymal Neurocysticercosis

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38 yrs old male presented with 4 months history of headache, vomiting and right focal seizures of one week duration. On examination, patient was conscious, oriented, pupil 3 mm equally reacting to light on both sides. Fundus was normal. No weakness of limbs noted. CT Brain showed Small cystic lesion with surrounding edema seen in right parietal lobe. Large cyst in left frontal lobe. Small calcified granuloma in left parasagittal parietal lobe (Figure 1). MRI Brain showed Cystic lesion with small mural nodule seen in occipital lobe (Figure 2). Diagnosis of neurocysticercosis was made. Patient was treated with albendazole, steroids and antiepileptics. Patient was free from headache, vomiting and seizures.

On follow up, after 6 months he developed headache, vomiting and right focal seizures. on examination, patient was drowsy, pupil 3 mm equally reacting to light on both sides. Fundus was normal. Weakness of right upper and lower limbs was noted.

Repeat CT Brain showed Previous cystic lesion in right parietal lobe is calcified. Left frontal lobe cystic lesion is increased in size compared to previous scan (Figure 3). CT Brain(Contrast) showed mild contrast enhancement of periphery of cyst in left frontal lobe with ipsilateral compression of lateral ventricle (Figure 4). Patient was taken up for surgery in view of raised intracranial pressure. Craniotomy was done. The cyst was excised. Patient’s sensorium improved. Weakness of right upper and lower limbs was also improved. CT Brain Post operative image, showed left parietal craniotomy with excision of left frontal lobe cystic lesion (Figure 5). Histopathology of the cystic lesion showed cross section of a parasite with brood capsule and scolices in the inner cuticular layer. The subcuticular layer shows cellular layer. The above features are characteristic of cysticercosis.

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subcuticular layer shows cellular layer. The above features are characteristic of cysticercosis (Figure 6). At 6 months follow up, patient recovered completely (Figure 6).

Giant intraparenchymal cysticercosis is a relatively rare presentation of neurocysticercosis (NCC) and only few reports have been published. Clinical presentation of NCC is variable and depends on the location, growth, size, number of cysts, stage of cyst and host immune response. Diagnosis of NCC is mostly based on the clinical and radiological methods. MRI is the radiological modality of choice to determine the pathological stage of the cyst. The stage of the cyst determines the MRI cyst morphology. Viable cysts show neither enhancement nor perilesional edema, and are hypointense to brain parenchyma. Large cysticercus in NCC causing elevated intracranial pressure are commonly seen in subarachnoid space. NCC is usually managed medically. Surgery is usually recommended for intraventricular cysts, large cisternal cysts, large parenchymal cyst and when the diagnosis is not certain in imaging studies. The outcome of the patients with parenchymal and intraventricular cyst is usually good.

This case is being presented for its rarity and highlights the need of follow up with imaging studies.

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References