EDITORIAL

Management of Hypophysitis from neurosurgery perspectives

Pituitary gland lesions account for 10% of all intracranial neoplasms and 80% of pituitary adenomas.[1]

Hypophysitis is a rare group of inflammatory conditions affecting pituitary gland. It mainly affects women during post-partum period although not usually related to pregnancy.[3]

Hypophysitis accounts for 0.5% of symptomatic pituitary lesions and may clinically mimic the pituitary adenoma.[4]

Pituitary hypophysitis can be classified into primary (most common) or secondary (rare) subtypes. The cause behind the former is unknown while the later occurs secondary to pituitary inflammation either through direct spread from the contagious air sinuses or as a part of systemic disease.[5]

Secondary hypophysitis from direct spread can be due to viral, bacterial, fungal or tubercuolus etiologies. This process may occur as a part of localized or generalized infection sources such as meningitis and sepsis. This is sometimes facilitated by a pre-existing sellar lesion such as adenoma, craniopharyngioma or Rathke´s cleft cyst. In the absence of a pre-existing sellar lesion, adenohypophysitis occurs due to direct or hematogenous spread from sphenoid sinusitis, meningitis, cavernous sinus thrombophlebitis or a contaminated cerebrospinal fluid (CSF) leakage.[5]

Besides infectious etiology, hypophysitis can be drug induced, autoimmune[2] or secondary to systemic diseases such as Langerhans cellm Histiocytosis, sarcoidosis, Wegener's granulomatosis, Takayasu disease or Crohn disease.[6]

The transmission of the disease occurs through emissary veins to the pituitary gland leading to adenohypophysitis, which manifests early as a focal edema formation and gradually progress to abscess formation which is considered fatal if left untreated.[7]

The inflammatory lesions of pituitary gland mimic seller tumors both clinically and radiologically. Patients usually presents with either symptoms secondary to mass effect or hypophyeal dysfunction. The later may be either due to inflammatory destruction of pituitary gland or to compression of normal gland by edema.

Therefore, clinically patients can present with headache, visual problems or sign and symptom of hypopituitarism. Patients may present with diplopia secondary to cavernous sinus involvement or with symptoms and signs of hypopituitarism, diabetes insipidus, or features of meningeal irritation.[2]

Therefore, the diagnosis of this condition can be established by combining clinical, laboratory and radiological features. The presence of a past history of sinusitis or sepsis may also give a high suspicion for diagnosis.

MRI is considered the investigation of choice. Hypophysitis appears as symmetric enlargement, loss of brightness of pituitary, homogeneous or heterogenous dural based enhancement that looks like a tongue. CT brain with contrast scan may also help in establishing the diagnosis especially in cases of contagious spread.[2]

Management of this condition should be directed at releasing the symptoms, reducing the size

and replacing deficient hormones.

Treatment with injectable antibiotics is the first line of management and should be continued for long time because the small emissary veins, small foramena at near by sinus cavity and the tiny blood vessels supplying the sinus will all need a prolonged duration for antibiotics to be effective.[7] Treatment with corticosteroid therapy should be reserved for selected cases.[2]

Some patients who fail to respond to medical treatment may need surgical intervention through trans-sphenoidal approach.[8]

Conclusion:

Inflammatory diseases affecting pituitary gland are rare when compared to adenomas. Pan-sinusitis should not be neglected because it can lead to hypophysitis if left untreated. Although brain MRI is considered the gold standard investigation but it is non conclusive as it is difficult to distinguish between inflammation and adenoma relaying on radiological findings only.

Accurate diagnosis requires high degree of suspicion and correlation of clinical, laboratory and radiologic features of the disease.

Medical treatment with antibiotics is the cornerstone in managing thesecases. Rarely surgical intervention is needed through trans-sphenoidal approach.

Finding out the source for primary infection, treating pan-sinusitis if any, giving antibiotics for long time, giving steroids to reduce pituitary gland's size, inflammatory response and restore pituitary function and long-term follow up with imaging and hormonal studies are the main relay stations in managing this condition.

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