Answer to Clinical Image - 2

Answers:

1. MRI of the brain with pituitary protocol
2. Magnetic Resonance Imaging (MRI) T1 and T2-weighted images in the sagittal and coronal planes, confirmed the presence of a large, lobulated mass involving the sella and suprasellar region
3. Bitemporal hemianopia: most common lesion produced by chiasmal compression.
4. Pituitary macroadenoma
5. 3 important differentials:
   a) Craniopharyngioma: MRI of Pituitary region demonstrates a suprasellar mass which is predominantly cystic with a small enhancing posterosuperior nodule. The mass elevates and distorts the optic chiasm but does not extend into the pituitary fossa.
   b) Rathke cleft cyst (if cystic) : intracystic mural nodule is specific but not very sensitive , fluid-fluid levels are rare, more likely to be midline, less likely to have a dark T2 rim
   c) Meningioma :separate pituitary is usually identifiable, dural tail usually visible, enhancement more vivid, hyperdense on non-contrast CT
6. Treatment for pituitary macroadenomas involves surgery (typically transsphenoidal surgery), radiation therapy, and medication,

Discussion:

Pituitary macroadenomas produce a complex therapeutic dilemma since they can induce both hormonal dysfunction and compressive symptoms. Early detection and effective care are critical for preventing neurological impairments and improving patient outcomes [1].

Medical management approaches can be tried first in prolactinomas, somatotroph, and thyrotroph adenomas.[2] Dopamine agonists, such as bromocriptine and cabergoline, have been shown to diminish prolactinoma growth and reverse hyperprolactinaemia [3]. Dopamine agonist therapy has been shown in patients with macroprolactinomas to reduce tumor size in 50-90% of instances and normalize serum prolactin levels in 60-95% of cases [4]. Previous imaging studies have also found that the greatest reduction in tumor size and serum prolactin levels occurs during the first 3-6 months of treatment, and the absence of significant improvement during this time is a strong predictor of pharmacological resistance to dopamine agonist therapy . [5]

The mainstay of treatment for pituitary macroadenomas is still surgery, which aims to relieve symptoms and decompress surrounding structures. Because it is less intrusive and has a lower rate of morbidity than conventional methods, the trans-nasal trans-sphenoidal endoscopic approach has become the method of choice [6,7]. In this instance, the patient experienced symptom relief following the successful trans-nasal trans-sphenoidal endoscopic excision of the pituitary macroadenoma. Postoperative problems, however, are prevalent and need to be carefully managed. In this instance, supportive care and antibiotic treatment were required after the postoperative CT scan showed hyperdense lesions and mixed-density collections [8]. To properly handle complications and guarantee the best possible outcome, careful postoperative monitoring and the right kind of intervention are crucial.

Radiation therapy should be considered in the management of patients with pituitary adenomas, particularly when medical and surgical options have been exhausted.[9] Success of radiation therapy in controlling tumor growth is high, 90-100% in most series, regardless of radiation technique and adenoma subtype. Success in achieving hormonal normalization in secretory tumors is more variable because of differences in patient population, radiation technique, and doses employed and variation of the definition of success. [10] Complete biochemical remission is generally achieved in 50% of patients at 10 yr after treatment for most adenomas.

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