

Prolactinoma: A Little Too Big

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Background: Giant prolactinomas represent 2-3% of all prolactin-secreting tumors associated with headache, vision changes, and endocrine symptoms, as well as unique manifestations related to extensive invasion of surrounding structures¹.

Case Description: A 22-year-old man with no past medical history presented with worsening right-sided headache, neck stiffness, dyspnea, vomiting, and epistaxis for one week. He had previous brain imaging due to long-standing headaches for years but did not know the results. He was afebrile and his exam was notable for ptosis and exophthalmos of the right eye, and as well as anisocoria. Initial tests revealed a leukocytosis of 21,200 with 92% neutrophilic predominance and prolactin level >4500. CT and MRI head revealed 3.8cm x 5.7cm x 2.7cm macroadenoma arising from an enlarged sella, extending superiorly upon the optic chiasm, invading the right sphenoid sinus and both cavernous sinuses, and completely encasing both internal carotid arteries. The patient was initiated on cabergoline and empiric antibiotics. His blood cultures grew *S.Pyogenes*, raising high suspicion for meningitis. However, lumbar puncture and neurosurgical interventions were deferred given the size of the mass and involvement of surrounding structures. Hospital course was complicated by episodes of severe agitation and confusion. After a week of treatment, the patient had improvement of his symptoms and prolactin level. A repeat MRI showed new regions of necrosis within the mass, and mass effect of the right medial temporal lobe with associated edema. He was discharged with cabergoline, ceftriaxone, and dexamethasone taper.

Discussion: Giant prolactinomas are rare presentations that could result in mass effect and bony erosions of surrounding structures, thereby resulting in cerebral spinal fluid infections and altered mental status. Medical management is preferred over surgical intervention despite the size of giant prolactinomas². Recognition of such potential complications is critical in the diagnosis, evaluation, and management of large pituitary masses.

Figures/Images:

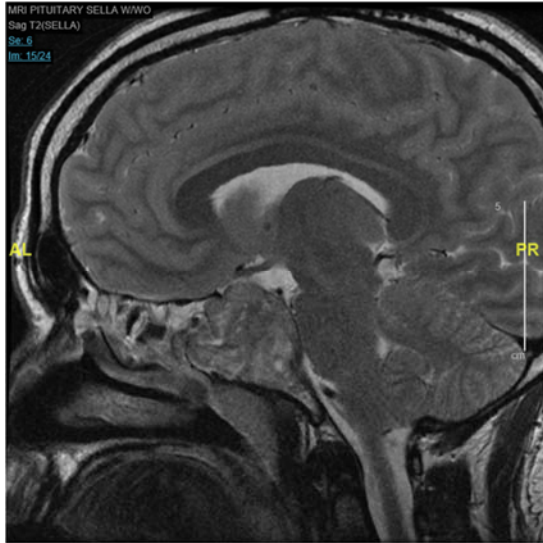


Figure 1: T2 Flair Sagittal View

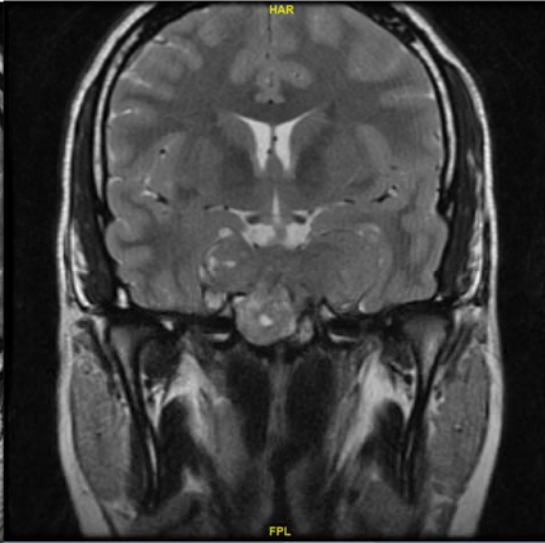


Figure 2: T2 Coronal View



Figure 3: T1 Flair Horizontal View