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Giant hemorrhagic pituitary macroadenoma mimicking pituitary apoplexy: a case report

Dr. Venkatesan, M.CH Neurosurgery; Dr. Janani S, MBBS

¹Fuwai Central China Cardiovascular hospital (Central China Fuwai Hospital of Zhengzhou University), Zhengzhou, China.

Statement of the Problem: Pituitary macroadenomas are common benign tumors of the anterior pituitary, often complicated by hemorrhage, significantly altering their clinical course and surgical complexity. Hemorrhagic macroadenomas may present subtly, without classic pituitary apoplexy signs, leading to delays in recognition and timely intervention. Early surgical decompression is crucial to prevent permanent visual loss and endocrine failure. This report highlights a rare case of hemorrhagic giant pituitary macroadenoma without classical apoplexy features, emphasizing early multidisciplinary management.

Case Presentation: A 36-year-old woman with hypothyroidism presented with a three-month history of dull frontal-temporal headaches and progressive visual loss. Examination revealed right-eye blindness and reduced left-eye visual acuity, with intact extraocular movements. MRI demonstrated a large (5.2 x 2.7 x 2.6 cm) sellar-suprasellar mass with central hemorrhage, compressing the optic chiasm and displacing the left optic nerve. Hormonal evaluation showed elevated prolactin and low cortisol. After multidisciplinary evaluation, she underwent a right pterional craniotomy for subtotal tumor excision and optic nerve decompression. Intraoperatively, a highly vascular tumor displaced major vessels. Postoperative diabetes insipidus and hyponatremia were managed with desmopressin, IV hydrocortisone, and fluid titration. Histopathology confirmed a pituitary neuroendocrine tumor (PitNET) with focal prolactin and growth hormone positivity and low Ki-67 index (~1%). By postoperative day 10, she was ambulatory, neurologically stable, and had significant left-eye visual improvement, although right-eye blindness persisted due to optic atrophy.

Conclusion & Significance: This rare case underscores that giant hemorrhagic pituitary macroadenomas, even lacking classical apoplexy features, demand urgent surgical intervention. Early recognition and timely multidisciplinary management significantly enhance visual and hormonal outcomes, emphasizing the critical need for clinical vigilance to prevent irreversible deficits.

Biography

Dr. Venkatesan, M.CH Neurosurgery, is an experienced neurosurgeon specializing in complex neurosurgical cases and multidisciplinary approaches in neurology.

jananisridharsn@gmail.com

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