

CASE REPORT



Pituitary Apoplexy Secondary to Thrombocytopenia due to Dengue Hemorrhagic Fever: A Rare Case Report

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Abstract

Pituitary apoplexy (PA) is an acute clinical syndrome characterized by sudden-onset headache, vomiting, visual disturbances, altered sensorium, and ophthalmoplegia, secondary to hemorrhage or infarction within a pituitary tumor or non-tumorous pituitary gland. A 45-year-old Female presented with generalised weakness, Seizures, fever and headache. Thrombocytopenia due to various causes may be a predisposing factor for pituitary apoplexy in a patient with underlying pituitary disease. We describe dengue as a probable novel condition for pituitary apoplexy because it may be associated with multiple risk factors for pituitary infarction or bleeding

Keywords: Pituitary apoplexy; Dengue hemorrhagic fever; Thrombocytopenia

Introduction

Pituitary apoplexy (PA) is an acute clinical syndrome characterized by sudden-onset headache, vomiting, visual disturbances, altered sensorium, and ophthalmoplegia, secondary to hemorrhage or infarction within a pituitary tumor or non-tumorous pituitary gland^(1,2).

PA may occur spontaneously or as a result of multiple risk factor. Dengue fever causes thrombocytopenia, which, in turn, can precipitate PA^(3,4).

Dengue hemorrhagic fever (DHF) is characterized by fever, hemorrhagic

tendencies, thrombocytopenia, and increased vascular permeability⁽⁵⁾.

Materials and Methods

In this case report, we reviewed the clinical presentation, diagnosis and management of a case of pituitary apoplexy in setting of DHF.

Other cases of pituitary apoplexy associated with thrombocytopenia are reported in literature.

Similar study conducted shows morbidity rate for PA was 15% and one patient died after surgery (mortality 0.7%)⁽⁶⁾.

Case Report

A 45-year-old Female presented with generalised weakness, Seizures, fever and headache. Routine investigations revealed thrombocytopenia. After testing for serology, Dengue IGM was positive. Patient was diagnosed with Dengue Hemorrhagic Fever. After 2 days her headache worsened and was also associated with vomiting. Magnetic Resonance Imaging was done that revealed Pituitary apoplexy in a pituitary macroadenoma.

Results

MRI revealed pituitary apoplexy in a pituitary macroadenoma. A trans nasal, trans sphenoidal endoscopic pituitary macroadenoma excision was done.

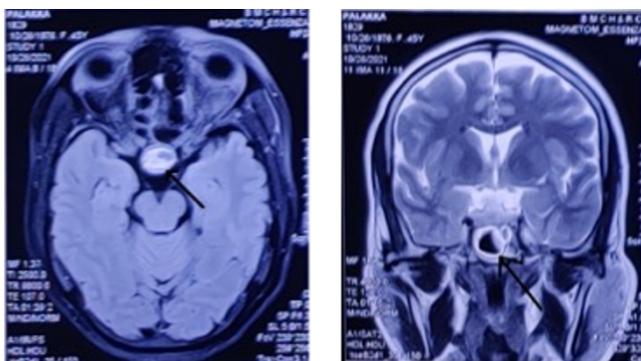


Fig 1. MRI scan

Histo-pathologic examination documented pituitary macroadenoma infiltrated by blood cells. Immunohistochemistry was done and specimen was sent for genetic studies.

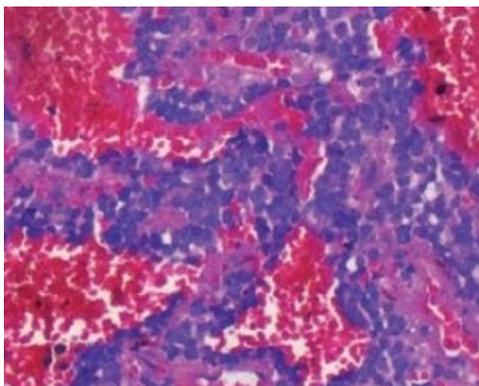


Fig 2. Histopathology examination

Discussion

The incidence of pituitary apoplexy in pituitary tumors is about 2% - 12%⁽⁷⁾. The important risk factors for PA are cerebral angiographic procedures, systemic hypertension, surgeries (cardiac and orthopedic), head injury, coagulopathies, and drugs⁽⁸⁾. Our patient had thrombocytopenia from dengue fever, which precipitated apoplexy. The most common hormonal deficiency is corticotrophin deficiency, occurring in up to 80% of cases, resulting in severe hemodynamic instability and hyponatremia⁽⁸⁾. MRI is the investigation of choice. Transsphenoidal surgery is the recommended surgical approach⁽⁸⁾.

Conclusions

Thrombocytopenia due to various causes may be a predisposing factor for pituitary apoplexy in a patient with underlying pituitary disease. We describe dengue as a probable novel condition for pituitary apoplexy because it may be associated with multiple risk factors for pituitary infarction or bleeding. It is essential for the treating physician to be aware of pathophysiology of both the conditions and their interplay at hemodynamic and endocrine levels. Management of raised ICP secondary to hydrocephalus, timing of surgical intervention, fluid and electrolyte balance are must for good outcome in the combined setting of pituitary apoplexy and DHF.

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