

VISION LOSS DUE TO PITUITARY APOPLEXY: A RARE PRESENTATION OF DENGUE FEVER

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ABSTRACT

Introduction Pituitary apoplexy (PA) is an endocrine emergency resulting from hemorrhage or infarction within a pituitary tumor or non-tumorous pituitary gland. The most important predisposing factors for PA are cerebral angiographic procedures, systemic hypertension, surgeries, head injury, coagulopathies, and drugs. Thrombocytopenia is a risk factor for PA. **Purpose** Dengue fever causes thrombocytopenia and there are reported cases of dengue hemorrhagic fever and dengue fever without hemorrhagic manifestation predisposing to PA. But there are no reported cases of dengue fever per se predisposing to PA leading to early vision loss, and we report such a case of dengue fever leading to pituitary apoplexy in pre-existing macroadenoma. **Case** 30 year male patient without any past comorbidity presented with complaint of fever and headache since 2 days and came dengue ns1 +ve on 3rd day of admission he developed worsening of headache and complete left sided ptosis and painful ophthalmoplegia, further workup and mri brain showed pituitary hemorrhage in underlying asymptomatic pituitary adenoma. With rapid deterioration patient lost vision in 2 days before surgical intervention was done. **Conclusion** Pituitary apoplexy is a vision and potentially life threatening disorder with which every physician needs to be acquainted. Dengue fever with thrombocytopenia is potential risk factor for pituitary apoplexy. Prompt diagnosis and initiation of treatment is of utmost importance.

KEYWORDS : Dengue Fever, Pituitary Apoplexy

INTRODUCTION

The word apoplexy is defined as a sudden neurologic impairment, usually due to a vascular process. Pituitary apoplexy is characterized by a sudden onset of headache, visual symptoms, altered mental status, and hormonal dysfunction due to acute hemorrhage or infarction of a pituitary gland. An existing pituitary adenoma usually is present. The visual symptoms may include both visual acuity impairment and visual field impairment from involvement of the optic nerve or chiasm, and also may include ocular motility dysfunction from involvement of the cranial nerves traversing the cavernous sinus. Diagnosis is based on history, examination, and neuro-imaging. Treatment can vary between conservative management and surgery, which generally is by the trans-sphenoidal route. Prognosis can vary, but is generally favorable if diagnosed and treated in a timely manner.

Case Report

30 year male presented to medical opd with chief complaint of high grade fever (102-103 F), intermittent in nature without chills/rigor with headache- generalized, dull, continuous since 2 days, generalized bodyache and fatigability since 2 days.

On examination

Day1- Temperature - 101.6F, pulse- 74/min, blood pressure - 108/70mmhg, Respiratory auscultation bilateral clear.

Day2- Developed sudden onset left sided complete ptosis, painful ophthalmoplegia, and visual loss (light perception+ve in left eye).

Day3 patient developed nausea, vomiting, blurring of vision in right eye, blood pressure- 104/70mmhg, PR-98/min.



Investigation:

INVESTIGATIONS	26-Oct-22	27-Oct-22	28-Oct-22	01-Oct-22
Hb (gm/dl)	13.4	13.1	12.6	
WBC(cells/cumm)	4,800	3,700	3,400	
Platelet (laks/cumm)	38,000	26,000	24,000	
Creatinine (mg/dl)	1.4	1.2	1.2	
DENGUE NS1		positive		
S.cortisol (range- 6.7 - 22.6 mcg/dl)				1.6
S.prolactin (normal- < 20ng/ml)				1.01
Usg abd-kub-chest	Normal		Normal	
2decho			Normal	
D-fundus		left side pale disc		

MRI BRAIN: 20*16*31 mm altered signal intensity in sellar and suprasellar region compressing optic chiasma and cavernous sinus: pituitary apoplexy in underlying macroadenoma.



Initially patient was kept conservative as dengue fever, later on after development of signs-symptoms of pituitary apoplexy injection hydrocortisone was started due to development of postural hypotension. Patient was referred to higher center and there he was operated - Transnasal, transsphenoidal endoscopic excision of sellar and suprasellar pituitary adenoma. In follow up after 2 month, patient vitally stable, bilateral light perception+, repeat mri brain showed post operative changes with no residual lesion.

DISCUSSION:

Total of 5 cases of dengue hemorrhagic fever ^(1,2,4,5,6) and 1 case of dengue fever with thrombocytopenia ⁽³⁾ leading to pituitary apoplexy has been reported till now. In developing country where dengue is endemic and becomes flooded with patients at government setup, it is important to clinically diagnose patient developing complication in dengue. Eg, fluid overload, pulmonary edema, pleural effusion or any third space loss, dehydration, renal shut down and shock. Pituitary apoplexy can also be considered as a rare but grave complication of dengue viral fever with thrombocytopenia. Clinically in limited resources setup in all patient with severe headache, ophthalmoscopy can be useful to rule out dangerous headache, eg. Pituitary apoplexy will show disc pallor/papilloedema.

Pituitary infarction/hemorrhage in pre-existing macro adenoma will lead to compression of surrounding structures including optic chiasma leading to visual field defect, compression of cavernous sinus leading to V1, V2, 3rd, 4th and 6th cranial nerve palsy, feature of raised intracranial tension can also be present. Diagnosis is based on history, examination and neuro-imaging and treatment can vary from conservative to immediate surgical intervention.

4. CONCLUSION:

Dengue hemorrhagic fever and dengue fever with thrombocytopenia are potential risk factor of pituitary apoplexy. In limited resources settings or developing country where immediate neuro-imaging or surgical care may not be available, it is important to keep pituitary apoplexy as differential diagnosis in dengue patient with worsening of headache, developing fluid resistant hypotension and visual defect. High clinical suspicion and urgent medical and neuro-intervention can prevent vision loss.

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