Osteomyelitis of Frontal Bone


Abstract: A case of osteomyelitis of the frontal bone with a subperiosteal abscess, an extradural abscess and a frontal sinus fistula is presented here for its rarity. A brief review of literature and management of the condition is also discussed.

Keywords: Frontal bone osteomyelitis, Pott's Puffy tumor, Extradural abscess, Frontal sinus fistula.

Introduction

The frontal bone is diploic with a marrow cavity capable of developing osteomyelitis. A typically fluctuant swelling over the forehead known as “Pott’s Puffy Tumor” after Sir Percival Pott who described the condition in 1760, results from frontal sinusitis and osteomyelitis eroding the anterior table of frontal bone (Lund, 1977). It is a serious life threatening complication of frontal sinus infection. Introduction of antibiotics coupled with healthier population with ready access to medical care has reduced this condition to vanishing proportions amongst the privileged communities. Where such optimum conditions do not exist it is still a serious threat in sinus infection (Thomas and Nel 1977). Medline search of literature revealed that only 27 cases have been reported in world literature in the antibiotic era. The rarity of the case and paucity of literature had prompted us to report this case.

Case Report

A 50 years female presented with complaints of headache...
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Fig I Osteomyelitis of frontal bone with a discharging sinus over left upper eyelid

of 3 months, swelling over the forehead and left eyelid of 1 month and intermittent fever of 1 month duration. Headache was mild, continuous, localized over the frontal area and aggravated on bending forward. The swelling over forehead and left upper eyelid started 1 month back and later on burst open spontaneously with serosanguinous followed by purulent discharge. Subsequently a discharging sinus formed at the left upper eyelid. Patient had intermittent fever without chills and rigor in the last one month. There was no history of preceding upper respiratory tract infection, trauma, visual disturbances or altered sensorium during the illness. She is diabetic, diagnosed 3 months back, presently on insulin and oral hypoglycaemic (Glibenclamide). There was no history of tuberculosis and hypertension. Family and personal history were unremarkable.

Apart from a mild pallor, general physical examination was unremarkable. There was no cervical lymphadenopathy. Systemic examinations were normal. Local examination revealed puffiness of the frontal area and extreme tenderness over the frontal sinus on both sides (L>R). Rest of the nose and paranasal sinuses were normal. Examination of the left eye revealed a disrupted supraorbital margin and ptosis. There was a discharging sinus over the left upper eyelid with scanty pus and induration all around. The surrounding skin was erythematous (Fig I). Eyeball movements were normal. Throat and ears were normal. A provisional diagnosis of Osteomyelitis of frontal bone was made with a second possibility of malignancy of frontal sinus.

Haemogram revealed Hb-11 gm%, TLC-11, 200, DLC-P60% L19% E21% Urinalysis showed sugar 0.5%. Plain X-ray chest was unremarkable. Plain X-ray paranasal sinuses Water’s view showed osteolytic lesion of the frontal bone with destruction of left supraorbital margin (Fig II). Plain X-ray paranasal sinuses lateral view showed sequestration of the anterior table and destruction of the posterior table of frontal sinus (Fig III). Blood sugar was under control. Pus from the discharging sinus was sterile on culture and smear negative for acid fast bacilli. Exploration of the frontal sinus through a left Lynch Howarth incision revealed destruction of all the walls of

Fig II Plain X-ray PNS Water’s view showing osteolytic lesion of frontal bone with destruction of left supraorbital margin

Fig III Plain X-ray PNS lateral view showing sequestration of anterior table and destruction of posterior table of frontal sinus