

# Giant Osteoma of the Frontoethmoidal Sinus: A Case Report

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## ABSTRACT

Giant or large osteomas of the skull are uncommon. This is a report of a 14-year old girl presenting with a giant osteoma of the frontoethmoidal sinus. The osteoma was completely excised at limited craniectomy. There has been no recurrence at 2 years of follow up.

*KEW WORDS: Skull, Giant Osteoma*

## Introduction

Craniofacial osteomas are benign tumours of the skull often involving the paranasal sinuses. The frontal sinus is the most common site of involvement comprising 57% of all osteomas in the paranasal sinuses<sup>1</sup>; other sites such as ethmoidal, maxillary and sphenoidal sinuses are less commonly involved.<sup>2, 3</sup> Giant (>5cm in widest diameter) or large osteomas of the sinuses are uncommon. This is a report of experience with the management of a giant osteoma.

## Case Report

A 14-year-old girl was admitted to the neurosurgical unit of the Ahmadu Bello

University Teaching hospital, Zaria Nigeria with painful progressive swelling of the forehead associated with headache and persistent rhinorrhoea but no nasal bleeding. There was no fever, weight loss or preceding history of trauma. There were no visual disturbances dizziness or convulsion. Attempt at excision was made 4 months prior to presentation at a peripheral hospital without success.

Physical examination showed no pallor, temperature of 36.8°C, pulse rate of 80/minute and blood pressure of 90/60mmHg. There was an ovoid midline frontal swelling measuring 6cm x 6cm; the mass was non-tender, hard, and immobile and there was no fixation

of the overlying skin. There were no focal neurological deficits. Examination of other paranasal sinuses was normal. Haematocrit was 32%, haemoglobin genotype AA, and serum electrolytes and urea were normal. Skull radiograph showed a dense radio-opaque mass in the frontoethmoidal region (figure 1).

*Figure 1: Skull Radiograph Showing a the Large Frontoethmoidal Osteoma*



At surgery, the mass was found to arise from the frontoethmoidal sinus and was completely excised leaving a defect between the anterior cranial fossa and the frontoethmoidal sinus. The defect was repaired with pericranium. The defect in the frontal bone was not repaired at the same sitting. Histology confirmed the mass to be an osteoma.

Post operatively, the patient did well and was discharged from hospital on the 10<sup>th</sup> postoperative day. She has remained well at 2 years of follow up

and is awaiting cranioplasty for the frontal skull defect.

## Discussion

It has been noted that the incidence of paranasal sinus osteomas in sinus radiographs taken for any reason is about 0.43%.<sup>1,4</sup> Craniofacial osteomas are more common in the frontoethmoidal sinus.<sup>1,5,6</sup> Most paranasal osteomas are usually small but may rarely be giant (>5cm in widest diameter) or large as in the present report.

Though craniofacial osteomas are frequently small and asymptomatic, symptoms may occur. The complications that may arise include distortion of the facial skeleton, which was the main problem in our patient, obstruction of sinus ostia leading to mucocoele and infection. Though origin from the inner table and intracranial extension is unusual,<sup>5</sup> this may occur causing pressure on adjacent structures. The presentation in symptomatic cases is usually due to pain, orbital problems, and inward pressure causing epilepsy.<sup>4-6</sup>

Asymptomatic and small osteomas located within sinuses do not require surgery and are best left alone; they are followed up with periodic skull radiographs to identify increase in size and intracranial extension.<sup>4,6</sup> Surgical excisions is necessary for symptomatic and giant cases. Recurrence is rare if excision is complete.

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