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Giant Occipital Osteoma: “Horn in the Back”

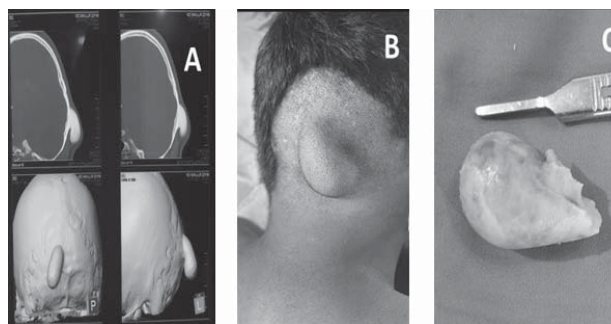


Figure 1. CT head showing the giant Occipital osteoma (A), The clinical picture (B) and the excised specimen (C).

Osteomas comprise 0.4% of all tumors and are the commonest primary benign bone tumor of the facial bone.^{3,5} It was first described by Stuart in 1940 as benign slow growing bone tumor.³ They may be either exostoses involving the skull or mandible, or the paranasal sinus type that involve the paranasal sinus and orbit. They are slow growing tumors that are mostly asymptomatic unless large in size (called giant if more than 30 mm) and the reason for presentation is usually cosmetic. Giant occipital osteoma is rare with only few cases reported.

A twenty year old male presented to the outpatient clinic with history of slow progressive enlarging lump over the back of his head since 8 years. It was visibly seen and was causing cosmetic problems along with pain over the site and difficulty on lying on his head, wearing a cap or playing sports. In the patient’s own terms he described it as a “Horn in the back”. There was no history of trauma of infection in the past. On examination there was a single large hard immobile bony lesion in the midline occipital area. The skin was free from the lesion. A computed tomogram (CT) was done which showed an occipital single large benign osteoma. He was taken for surgery and the whole lesion was excised with high speed cutting drill. It was very hard intraoperatively. Histopathology was consistent with benign osteoma. He was discharged on the same day and has been asymptomatic on follow up (Figure 1).

Osteomas are benign slow growing tumors of the facial bones, mandible or the paranasal tracts. The occipital type is very rare. They can be either the Ivory type (well differentiated bone with little fibrous component) or the Mature type (large trabeculae with lamellar, fibrous type). They are classified into four types as given in the Table 1.^{1,5}

Type	Characteristics
Skull vault	arise from the outer table (exostotic) or inner table (enostotic), and are usually asymptomatic.
Skull base	most common in the frontal sinus, but may also occur in the ethmoid air cells, paranasal sinuses, the maxilla, mandible and the temporal bone
Dural	have no bony attachment, arise mainly from the falx, are asymptomatic and are often incidental findings on plain radiographs
Intraparenchymal	have no connection to dura or bone, are the rarest type

Table 1. Classification of osteoma.¹

There is confusion regarding the pathogenesis of osteomas. It could be embryological arising from periosteal cells or cartilage cells, hormonal as they develop after puberty, they could arise after trauma or even after

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infections like tuberculosis or sinus infections.^{2,4,5} They are asymptomatic unless they grow to a large size or obstruct the orbital canal or paranasal sinuses. Management is usually conservative for the most. Large ones need to be excised. High speed cutting Burr with removal of the attachment along with few mm of the base will suffice for cure of skull vault osteoma. The deeper or paranasal sinus osteoma may need multidisciplinary approach depending on their size and involvement of surrounding structures. Histologically they are composed of osteoblasts, giant cells, and fibroblast with trabecular pattern. The differential diagnosis includes eosinophilic granuloma, fibrous dysplasia, meningioma, Paget's disease, metastases, Gardner syndrome and giant cell tumor. Malignant transformation of osteoma has not been reported yet.

References:

1. Haddad FS, Haddad GF, Zaatari G. Cranial osteomas: Their classification and management. Report on a giant osteoma and review of the literature. **SurgNeurol** **48**:143-7, 1997
2. Meher R, Gupta B, Singh I, Raj A. Osteoma of occipital bone. **Indian J Surg** **66**:365-7, 2004
3. Stuart EA. Osteoma of the mastoid- report of a case with investigations of the constitutional background. **Arch Otolaryngol** **31**:838, 1940
4. Varshney S. Osteoma of temporal bone. **Indian J of Otol** **7**:91-2, 2001
5. Yudoyono F, Sidabutar R, Dahlan RH, Gill AS, Ompusunggu SE, Arifin MZ. Surgical management of giant skull osteomas. **Asian J Neurosurg** **12**:408-11, 2017