An aneurysmal bone cyst is a benign expansile osteolytic lesion with a thin wall, containing blood-filled cystic cavities. The term aneurysmal is derived from its radiographic appearance.1 Aneurysmal bone cyst (ABC) lesion most often affects persons during their second decade of life. It may occur in any bone in the body. Although benign, it can be locally aggressive and cause extensive weakening of bony structure. It impinges significant pressure on the surrounding tissues. Its true etiology and pathophysiology is not yet clear. Treatment of choice is surgery. However, its total surgical removal can be done in one or multiple stages. Prognosis is excellent with complete removal but incomplete removal may affect its cure rate.2

This case report describes this tumor in occipital bone.

CASE REPORT

A 13 years old boy presented with gradually increasing painless hard swelling in occipital region for the last 3 months. There was no history of trauma. On physical examination, it was a non-tender approximately 6 x 5.5 x 5 cm mass in the left occipital region, which was hard and fixed to the bone having a smooth surface. Skin over the swelling was normal. There was no neurological deficit.

All routine investigations were within normal limits. A plain X-ray skull showed expansile lesion in the occipital bone with internal thin septae of ossification. CT scan revealed expansile lytic lesion in occipital bone with periosteal thinning and cortical break (Figure 1).

It showed internal septation giving a soap-bubble appearance. Intracranial extension of the lesion was exerting pressure over the cerebellum. On T2 weighted images of MRI scan revealed foci of increased signal intensity in occipital bone with loculation and contained multiple fluid-fluid levels (Figure 2). Lesion extended into the cranial cavity and displaced the adjacent...
Aneurysmal bone cyst of the occipital bone


The tumor usually enhances with contrast injection. MRI can also confirm the multiple fluid levels and non-homogeneity of the lesion because of the septa and variability in breakdown of blood products. Presence of paramagnetic blood breakdown products give rise to fluid levels of varying signal intensities ranging from very bright signal (extracellular methemoglobin) on T2 weighted imaging to a very low signal (intracellular deoxyhaemoglobin, cellular debris or haemosiderin).

Histologically the lesion is characterized by the presence of multiple, filled with venous blood and lined by spindle shaped fibroblasts and with scattered multinucleated giant cells and stromal cells.

Treatment of aneurysmal bone cyst will be one or the combination of many procedures.

Marginal or wide excision of the host bone is the surgical procedure of choice. Wide excision is recommended when the cyst is located in a bone considered expendable, such as the ribs or fibula. Due to the risk of recurrence associated with these cysts, adjuvant therapies, such as cryotherapy, a surgical freezing of the cyst are sometimes considered. Cryotherapy is associated with complication such as fracture of the bone, nerve injury and other, so is not widely accepted as standard in many institutions. Radiotherapy is used only if other means of treatment have failed.

Treatment of choice for aneurysmal bone cyst of skull is total excision of lesion. Due to vascular nature of the cyst there is some potential risk of bleeding during surgery. So pre-operative arterial embolization may reduce the risk of bleeding. However, surgical biopsy has itself been curative. Tendency for recurrence is related with young age of the patient, size of lesion, presence of mitosis and incomplete surgical removal. Radiotherapy has been advocated for deep situated lesions at the base of skull, dural involvement or where subtotal excision has been done but its effect is unclear. There is no role for chemotherpay.

REFERENCES


