

# INTRADIPLOIC EPIDERMOID CYST OF THE TEMPORAL BONE

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## SUMMARY:

*Epidermoid cysts are benign and congenital lesions. They commonly occur in the cranial cavity especially at the base of the brain and in the spinal canal. Intradiploic epidermoid cyst of the calvarium is very rare. We report an intradiploic epidermoid cyst of the temporal bone*

## KEY WORDS :

*Epidermoid cyst, Intradiploic*

## INTRODUCTION

Epidermoid cysts are benign, slow-growing, congenital lesions (2, 4, 11). Craniocerebral epidermoid cysts constitute approximately 1% of all cranial tumors (1, 9). Calvarial intradiploic epidermoid cysts are very rare. In 1838, Miller was the first to describe a diploic epidermoid cyst of the skull (2). According to Ciappetta et al., total 223 cases had been reported up to 1990 (2). Because of the slow expansion of the cyst, neurological deficit is absent or minimal. They are commonly seen as an incidental finding on x-ray examination.

In this paper, we report an intradiploic epidermoid cyst of the right temporal bone.

## CASE REPORT:

A 14 year-old female was admitted with a complaint of a painless lump on the right temporal region. For the three years before admission, she noticed this swelling and lesion had enlarged progressively. Neurological examination was within normal limits. On physical examination; an immobile, non-compressive and painless swelling was seen in the right temporal region. Plain x-ray revealed an osteolytic lesion

and clearcut sclerotic margins (Fig.1). Computed tomography showed an intradiploic, trabecular and isodense cyst of the right temporal bone and normal intracranial contents (Fig. 2). There were erosion the inner and outer tables. Under general anesthesia, a curvilinear skin flap was turned and the right temporal bone was exposed . On removing the thinned outer table of the bone; a solid , cheesy and dry material was seen.

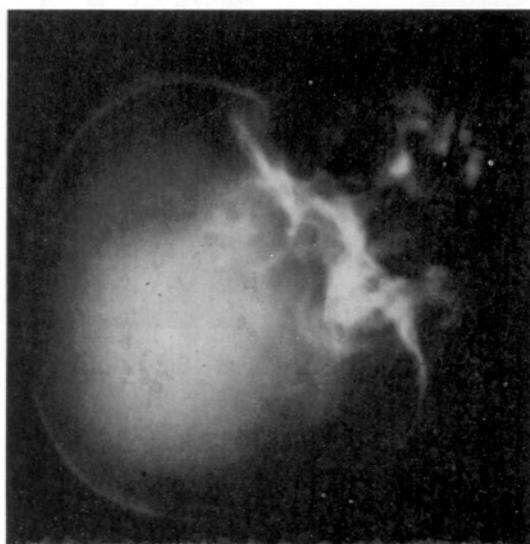


Fig 1 : X-Ray film of the skull showing a large lytic lesion in the temporal bone and clearcut sclerotic margins.

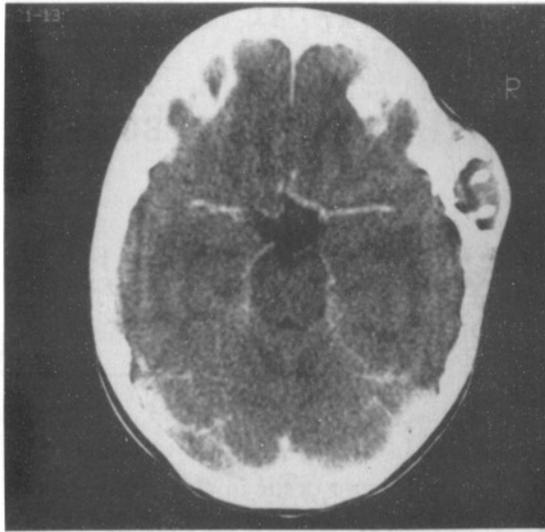


Fig. 2 : CT Scan showing an iso-hypodense lesion in the right temporal diploe.

The inner table appeared to be partly destroyed and the dura was intact. The cyst and eroded bone was removed totally. Acrylic cranioplasty was performed for the bone defect at the same operation. Histo-pathological examination was revealed an intradiploic epidermoid cyst (Fig.3). There were no complications in the postoperative period and the patient was discharged without neurological deficit.



Fig. 3 : Histopatological examination of the epidermoid cyst revealed desquamated keratin, epidermis and bone. H&E. 40X.

#### DISCUSSION:

Epidermoid cysts may occur in the scalp, within the diploe (9, 13), in the cranial cavity (8,

9) especially at the base of the brain (4, 14, 15), and in the spinal canal (7). Intradiploic epidermoid cysts commonly begin with a painless lump under the scalp, sometimes as a palpable bone defect. Calvarial intradiploic epidermoid cysts are less common than the intradural varieties which occur in the cranial diploe, paranasal sinus, orbit and petrous bone (4). According to Toglia, intradiploic localization of this lesion is 6,5% in all craniocerebral epidermoids (14). Epidermoid cysts have a thin capsule of stratified squamous epithelium (11). They occur because of sequestration of ectodermal elements. Congenital sequestration occurs between the third and fifth weeks of intrauterine life (2, 9, 11) and later break down into keratin and cholesterol (10, 11). Epidermoids do not contain dermal elements such as hair follicles or sweat glands. A pearly sheen is characteristic of the external appearance of many epidermoids and they are usually isodense or hypodense on computed tomography; however, high attenuation values have been reported (15). Calcification may be seen as in our case.

Cyst may destroy one or both tables, but because of the slow expansion of the cyst, neurological deficit is generally absent or minimal. They may occur at any age from the first to seventh decades (2). Although the majority of epidermoid cysts are benign, a few malign degeneration have been reported (2, 3, 5, 6, 14). The cause of malignency is unknown (14). Metastasis has not been reported. Epidermoid cysts are congenital lesions; rarely they may be iatrogenically induced by repeated percutaneous subdural taps (15).

Other lesions of the scalp and skull to be considered in differential diagnosis include calcified cephalhematomas, sinus pericranii, occult meningocele and eosinophilic granuloma (1, 12). These cysts are not radiosensitive and have a tendency to recur if only partly removed. So, they should be treated by radical surgical resection.

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