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## Case Report

# A case of dermoid cyst

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Scan)

### ABSTRACT

**Introduction :** Dermoid cyst is a common ocular tumour, it accounts for 3-9% of paediatric ocular tumour. Childers with dermoid tumour present with other congenital abnormality

**Case Report:** 13 year old girl presented to our OPD, with complains of swelling in her left eye upper lid since birth, patient has multiple facial anomalies. On ocular examination, her vision in both eyes were 6/6. A 3\*3cm noted in the left upper lid near the lateral canthus. Clinical diagnosis of Dermoid cyst left eye upper lid made. A surgical excision biopsy was planned under General anaesthesia. Intraoperatively the cyst removed with the cyst wall intact. Cut section revealed cystic lesion with tangle of hair follicles. Specimen sent for histopathology. HPE confirmed the diagnosis of teratomatous dermoid cyst.

**Conclusion:** Dermoid cysts account for 5% of all orbital lesions and are among the most common orbital tumors of childhood. Ophthalmologist should be aware to surgically excise these cyst meticulously so as to provide good cosmetic result to the patient.

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## 1. Introduction

Dermoid cyst is a common ocular tumour, it accounts for 3-9% of paediatric ocular tumour. Childers with dermoid cyst present with other congenital abnormality. More than 80% of dermoid cysts are found in the head region, especially in the orbital and preorbital areas representing 3-9% of all orbital masses.<sup>1</sup> Dermoid cyst sometimes may be large and may cause cosmetic disfigurement. A meticulous surgery of the Dermoid cyst would give a good cosmetic improvement to the patient.

## 2. Case Report

13 year old girl presented to our OPD, with complains of swelling in her left eye upper lid since birth. Swelling

was gradual in onset, progressive and not associated with pain. Patient has low set ears, microtia and dental anomalies (Figure 1). Her systemic examinations was normal.

On ocular examination, her vision in both eyes was 6/6. A 3\*3cm noted in the left upper lid near the lateral canthus (Figure 2). Skin over the swelling normal, no edema and no Erythema noted. Skin over swelling is pinch able, non tender and no warmth felt. Fluctuation test positive, Transillumination test negative. Slip sign was negative, No regional lymph node enlargement seen. CT scan orbit was taken which revealed a soft tissue swelling with no calcification, no underlying bony erosion or intracranial extension seen.

Clinical diagnosis of Dermoid cyst left eye upper lid made. A surgical excision biopsy was planned under General anaesthesia. Local anaesthetic injected over the cyst, An incision is made through the centre of the cyst following the eye lid crease, skin was dissected. The

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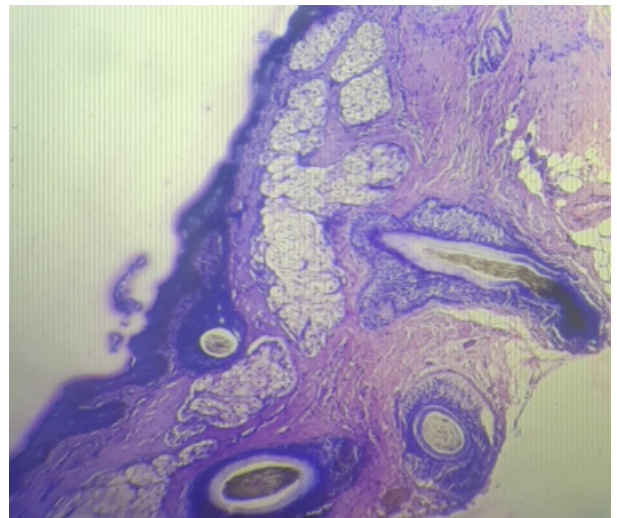
**Fig. 1:** Showing ear anomaly



**Fig. 2:** Swelling in left upper lid



**Fig. 3:** Cyst removed intoto



**Fig. 4:** HPE showing non keratinised stratified squamous epithelium with hair follicle

cyst wall identified, by blunt dissection cyst wall cleared from surrounding attachment, the cyst removed in total without rupturing the cyst wall (Figure 3). Cut section revealed cystic lesion with tangle of hair follicles. Specimen sent for histopathology. HPE confirmed the diagnosis of teratomatous dermoid cyst (Figure 4). Post operatively patient has good cosmetic result (Figure 5)

### 3. Discussion

Dermoid cyst is the commonly used clinical term for benign cystic teratoma, choristoma derived from sequestration of surface ectoderm into underlying mesenchyme along the embryonic line of closure.<sup>2</sup> Majority of dermoid cyst seen in ophthalmic practice are superficial and present in early childhood as discrete swellings in the eye brow or eyelid.<sup>3</sup> Orbital dermoids can be classified as juxta-sutural,



**Fig. 5:** Post-operative fig.

sutural or soft tissue cysts; superficial or deep; intraosseous or extraosseous, and intraorbital or extraorbital. These smooth, painless, mobile or partially mobile lesions mostly present at the fronto-zygomatic suture with proptosis, displacement, ptosis or diplopia, depending on depth and extent.<sup>4</sup> In the orbit, dermoid cysts are usually related to the Fronto-zygomatic and fronto-ethmoidal sutures which are particularly complex developmentally.<sup>1</sup>

Deep orbital dermoid cyst are infrequently seen, less easily diagnosed and require more extensive surgery like orbitotomy. In most cases the diagnosis of an orbital dermoid was made prior to surgery on the bases of the position and consistency of the cyst and typical appearances on X-ray or CT scan.<sup>5</sup>

Types of dermoid are

1. Congenital/Sequestration dermoid.
2. Implantation dermoid.
3. Teratomatous dermoid.
4. Tubuloembryonic dermoid.

Orbital dermoid or epidermoid should be excised because they enlarge and the contents leak into adjacent tissues. The material within these cyst is highly irritant and provokes a severe inflammatory reaction, often followed by fibrosis. These cyst should be excised in total with the cyst wall were possible using a surgical approach which gives good access to all parts of the lesion.<sup>3</sup> Eyelid crease incision was recommended for the management of superficial superotemporal dermoid cyst. This incision offers a better cosmetic result.<sup>1</sup> Cysts anterior to the Frontozygomatic suture (FTS) can be approached through an upper eyelid crease incision with adequate exposure and good cosmesis compared to an incision directly over the lesion.<sup>6</sup> Cysts far above the FZS are approached through an infra-brow or low intra-brow incision, in order to minimize traction on the frontal branch of the facial nerve, which may occur with an eyelid crease approach, and to avoid transecting the frontalis muscle which may occur with an incision directly over the cyst.<sup>6</sup> In 1988, Kronish and Dorzbach summarized previously advocated approaches to excising dermoid cysts including: (1) direct incision over the mass, (2) above, below, or through the eyebrow, (3) superomedially through a Lynch incision (4) medial lid splitting, (5) lateral canthotomy, and (6) upper lid crease.<sup>7</sup>

Aspiration of cyst walls was not recommended due to cyst recurrence and potential severe inflammatory reaction. Poorly planned, delayed or incomplete removal of the cyst may result in severe inflammation and permanent functional impairment.<sup>3</sup>

#### 4. Conclusion

Dermoid cysts account for 5% of all orbital lesions and are among the most common orbital tumors of childhood.<sup>8</sup> Of the dermoid cysts that arise in the head and neck area, approximately 61% arise in the periorbital region.<sup>9</sup> As patients need to be managed surgically, complete investigation like CT or MRI scan need to be done to rule out any bony erosions or intracranial extension. Dermoid cyst are mostly present in paediatric age group appropriate anaesthetic technique to be decided prior to surgery to avoid intraoperative complications. Ophthalmologist should be aware to surgically excise these cyst meticulously so as to provide good cosmetic result to the patient and to prevent recurrence and postoperative complications.

#### 5. Conflict of Interest

None.

#### 6. Source of Funding

None.

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