



A decade-long growth: Resecting a large paediatric eyelid dermoid cyst

Bouanani Othmane¹, Laassikri Omar²

Correspondence: Bouanani Othmane, Euromed University of Fes, Fes, Morocco, **Email:** bouananiothmane@gmail.com

Abstract

Dermoid cysts are benign congenital tumours of both ectodermal and mesodermal tissue and are most frequently found in the periorbital region, particularly at the tail of the eyebrow, with only 7% occurring in the cervicofacial region. An 11-year-old child with an intellectual disability presented with a congenital right upper eyelid swelling that had gradually increased in size. Clinical examination revealed a soft, mobile, painless 6-cm mass with normal overlying skin. Preoperative CT imaging demonstrated a cystic lesion at the frontozygomatic suture, consistent with a dermoid cyst. The cyst was completely removed through an upper eyelid incision under general anaesthesia, and haemostasis was verified. The immediate postoperative outcome was satisfactory, with no complications at follow-up. The diagnosis of an orbital dermoid cyst should be considered in cases of a congenital, firm, and mobile mass adjacent to surrounding structures that progressively increases in size. Complete surgical excision is curative and prevents recurrence or complications.

¹*Euromed University of Fes, Fes, Morocco*

²*Moulay Youssef Hospital, Rabat, Morocco*

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Introduction

Dermoid cysts are benign congenital tumours of both ectodermal and mesodermal origin¹. The cervicofacial location accounts for only 7% of these lesions, with the periorbital region being the most common, particularly near the tail of the eyebrow². The diagnosis of dermoid cysts is primarily clinical, especially for superficial lesions, although additional imaging can be used for deeper lesions. The treatment for these cysts is usually surgical, requiring complete excision to prevent recurrence³. We report the case of a large dermoid cyst in the upper eyelid of an 11 year old child, which was completely excised surgically with good postoperative results.

Case Description

We present the case of a 12 year old patient with a history of intellectual disability who had a right upper

eyelid swelling present since birth that gradually increased in size. The family reported no associated pain or inflammation. Our initial clinical examination revealed a soft, painless, mobile mass (approximately 6 cm in diameter) in the eyelid, movable against both the skin and deeper planes, and the overlying skin appeared normal without signs of inflammation (Figure 1).

The patient had previously undergone an external CT scan, which showed a cystic mass in the right frontozygomatic suture area, consistent with a dermoid cyst. Following our clinical and radiological evaluation and considering the patient's intellectual disability, we decided to perform a complete excision under general anaesthesia with a superior eyelid incision, allowing direct access to the cyst wall. Meticulous dissection was undertaken, with



careful attention to preserving cyst integrity, ensuring complete en bloc resection without capsular violation (Figure 2). This was followed by thorough verification of haemostasis upon procedure completion and copious irrigation of the surgical field, before layered wound closure, resulting in a satisfying immediate postoperative course, and no complications were identified during subsequent follow-up examinations.

Figure 1: Firm mass of the right upper eyelid



Figure 2: Complete excision of a dermoid cyst of the eyelid



Discussion

Dermoid cysts are benign congenital tumours caused by ectodermal inclusions in the subcutaneous tissues⁴. Dermoid cysts of the head are often located in the periorbital region, particularly at the tail of the eyebrow near the frontozygomatic suture⁵.

The diagnosis of an orbital dermoid cyst should be considered in cases of a congenital, firm, and mobile mass adjacent to surrounding structures, which progressively increases in size¹. It can be supplemented by radiographic imaging, notably CT scans, which reveal a heterogeneous lesion with a thin wall, hypodense content, and sometimes calcifications or adjacent bone lysis⁶. Alternatively, MRI may be requested in certain cases, especially to assess the relationship with adjacent structures, particularly muscular ones; it often shows lesions with T2 hyposignal².

The definitive treatment for dermoid cysts is complete surgical excision, which is crucial to prevent recurrence. This procedure requires meticulous technique to avoid intraoperative rupture, and when achieved, the long-term prognosis is generally excellent¹.

In our case, a complete excision of the cyst was successfully performed via an upper eyelid incision without any intraoperative complications, resulting in an uneventful postoperative course managed with oral analgesic and antibiotic therapy, and a follow-up examination revealed no significant oedema, haematoma, or infection; furthermore, given the patient's intellectual disability, the skin was closed using a running intradermal suture with 5-0 absorbable material to facilitate care and achieve a satisfactory aesthetic outcome.

Conflict of Interest Statement: The authors declare that there is no conflict of interest regarding the publication of this article.

GAIT for Generative AI use⁷: Generative AI was not used in the preparation or editing of this article. The authors take full responsibility for the accuracy and integrity of the work.

Patient Consent Statement: The authors have obtained full written and informed consent from the legal guardian of the patient for the publication of this case report, including all accompanying images.

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