



# International Journal of Medical Research & Health Sciences

[www.ijmrhs.com](http://www.ijmrhs.com)

Volume 3 Issue 3

Coden: IJMRHS

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ISSN: 2319-5886

Received: 22<sup>nd</sup> Apr 2014

Revised: 20<sup>th</sup> May 2014

Accepted: 6<sup>th</sup> Jun 2014

Case report

## PERIORBITAL DERMOID CYST

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### ABSTRACT

Dermoid cysts are a developmental benign choristomas, which are congenital lesions representing normal tissue/s in an abnormal location. These consist of ectodermal and mesodermal elements, lined with epithelium and contain hair with other skin structures. Periorbital dermoid cyst is commonly located at lateral one third of the eyebrow. It is asymptomatic however school going child suffers from social stigma. So its surgical excision for cosmetic purpose becomes necessary. Excision also prevents bony remoulding and recurrent inflammatory responses due to leakage of cyst contents. In this article we are presenting a six years old male child having periorbital dermoid in lateral right eyebrow. The intact dermoid cyst was excised surgically and sent for histopathological examination, which confirmed the diagnosis of dermoid cyst. We highlight the merits of early surgical intervention, even in an asymptomatic periorbital dermoid cyst.

**Keywords:** Periorbital dermoid, Surgical excision of periorbital dermoid.

### INTRODUCTION

Dermoid cysts are a developmental benign choristomas, which are congenital lesions representing normal tissue/s in an abnormal location. These consist of ectodermal and mesodermal elements, lined with epithelium and contain hair with other skin structures.<sup>1</sup> These results from the sequestration of embryonic epithelium between orbital bones, usually along suture lines.<sup>2</sup> They are often evident soon after birth.<sup>3</sup> Depending on location dermoid cysts are divided into superficial periorbital and deep orbital dermoid cysts. The most common location of the dermoid cyst is lateral one third of the eyebrow.<sup>4</sup> Periorbital dermoid cysts can be asymptomatic or present in infancy with mild to moderate ptosis depending upon the size while, orbital deep dermoids present in adults with proptosis and asymptomatic school going child suffers from social stigma. Leakage of contents may lead to inflammatory response & fibrosis around cyst. Thus,

in asymptomatic patient also complete surgical excision with an intact capsule of periorbital dermoid cyst is needed not only for the cosmetic benefit, but also to prevent the recurrence and the acute inflammatory response due to leakage of cyst contents. Here we are presenting the surgical management of a periorbital dermoid, located in lateral part of right eyebrow and involving upper eyelid, in a six year old male child.

### CASE REPORT

A 6 years old male child accompanied by parents came to Pravara Rural Hospital, with painless, progressive swelling at lateral part of right eyebrow involving the right upper eyelid since childhood. (Fig 1)

General and systemic examination of the patient was normal. Family history was not contributory. Slit

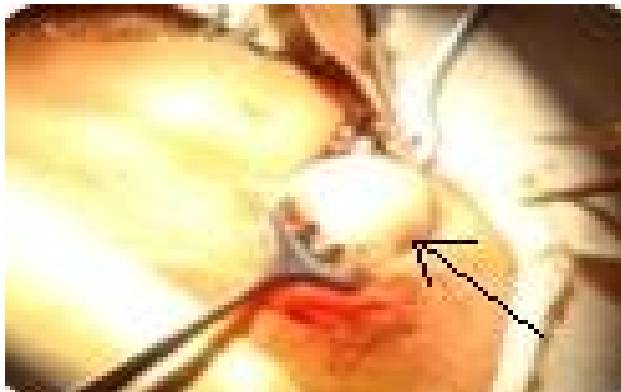
lamp examination and direct ophthalmoscopy showed normal anterior and posterior segment in both eyes. Visual acuity in both eyes was 6/6 (snellens chart). Extraocular movements were full and free in all directions of gaze.

In local examination the swelling was 1×1×0.5cm present just below the right eyebrow at the lateral 1/3<sup>rd</sup> of the upper eyelid and there was mild mechanical ptosis. The swelling was soft, non tender, freely mobile, non adherent to the overlying skin. Assessment of posterior aspect of mass with a finger was possible.

Patient had normal Haemogram. Radio-imaging showed normal chest X-ray and X-ray orbit showed no bony involvement. CT scan ruled out the intracranial extension.



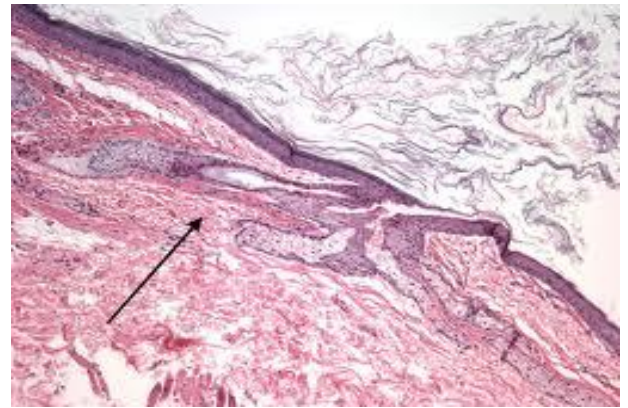
**Fig 1: Dermoid cyst Located in lateral aspect of right upper eyelid**



**Fig 2: Surgical excision of dermoid in-toto.**



**Fig 3: Removal of Intact dermoid.**



**Fig 4: Histology showing cyst hair follicle, sebaceous and sweat glands.**



**Fig 5: First post-operative day.**

With proper consent and anaesthetic fitness complete excision of intact dermoid cyst was carried out under general anaesthesia (Fig 2) and the intact cyst (Fig 3) was sent for histopathological examination which showed lining of squamous epithelium with dermal elements as hair follicles, sebaceous, and sweat glands which confirmed the diagnosis of dermoid cyst (Fig 4). First post operative day event full. (fig 5) Follow up examination showed no inflammatory response or any recurrence for 18 months.

## DISCUSSION

Dermoid cysts account for 3-9% of orbital tumours in children and are one of the most common non-inflammatory space-occupying orbital lesions in the paediatric population.<sup>5,6</sup> Dermoid cysts results from the sequestration of embryonic epithelium between orbital bones. They are usually present along suture lines.

Dermoid cyst contains sebaceous fluid, keratin, calcium and cholesterol crystals with adnexal structures as hair follicles, sebaceous glands and sweat glands.<sup>7</sup>

Incomplete removal of cyst can result in recurrence. Superficial periorbital dermoids may present at superolateral aspect of the orbit at frontozygomatic suture or rarely medially along frontoethmoidal or frontolacrimal sutures.<sup>8</sup>

In superficial periorbital dermoids palpation of posterior aspect of dermoid cyst rules out the posterior extension and its localized nature without extension is diagnosed clinically. However, inability to palpate the posterior aspect of periorbital dermoid cyst, radio-imaging becomes mandatory to know the posterior extent of lesion where a CT imaging helps. In all orbital dermoids radio-imaging is necessary.<sup>9,10</sup> MRI is another imaging modality for dermoid cysts which gives the added advantage of non exposure to radiation.

Though periorbital dermoid cyst is asymptomatic, it requires surgical excision not only for cosmetic reason and social stigma in school going child but also to prevent complications like (i) bony remoulding (ii) exaggerated inflammatory response due to leakage of its content and (iii) malignant transformation.<sup>11,12</sup>

In our case, since the periorbital dermoid cyst was localised, non adherent to surrounding tissue or orbital margins, complete excision with an intact wall of dermoid cyst was carried out, which gave good post operative cosmetic result and 18 months postoperative follow up showed no postoperative inflammation or recurrence

## CONCLUSION

Periorbital dermoid cyst presenting in early childhood, though asymptomatic, has to be removed surgically for better cosmetic effect, to prevent bony remoulding, to prevent cyst leakage inflammatory response and to prevent rare teratogenic-malignant transformation in later life. Complete excision with an intact wall of dermoid cyst give good post operative result.

## ACKNOWLEDGEMENT

We are thankful to HOD (Professor) Dr. Dongre and Professor Dr. Karle for providing the histopathological report and slide.

**Conflict of interest: No**

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