

## CASE REPORT

# A case series on conjunctival dermolipoma removal: A comprehensive analysis of simple excision and postoperative results

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### ABSTRACT

Conjunctival dermolipomas are benign mass composed of adipose tissue commonly found in periorbital regions. This case series presents a comprehensive analysis of dermolipoma excision and its outcomes, shedding light on the efficacy and safety of simple excision method. A total of 10 patients with clinically and radiologically diagnosed dermolipomas underwent excisional procedure. Detailed preoperative assessments and postoperative follow-ups were documented for each case.

The study aims to evaluate the success rates of dermolipoma excision in achieving complete removal, minimizing complications, and optimizing cosmetic outcomes. All patients were postoperatively monitored upto 1 - 2 months, with a focus on assessing wound healing, patient satisfaction, and addressing any potential complications.

The findings of the study suggest a high rate of success in achieving complete dermolipoma removal, with minimal postoperative complications observed. The positive patient feedback and the absence of major complications in our study suggest that simple excision stands as a well-tolerated surgical intervention for dermolipomas, benefiting patients both functionally and aesthetically.

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### INTRODUCTION

Dermolipoma is the 2<sup>nd</sup> most common conjunctival mass in children. It is the most common epibulbar choristoma.<sup>[1]</sup> (Choristomas are normal tissue in an abnormal site). It is a benign mass composed of adipose tissue with keratinized stratified squamous epithelium. Most common location is usually the superotemporal conjunctival fornix.<sup>[2]</sup> Dermolipomas near the lacrimal gland and lateral rectus muscle is derived from an ectopia of the ectoderm to the conjunctiva, probably due to sequestration at the time of embryonic development of the eyelid<sup>[3]</sup>. A dermolipoma should be differentiated from orbital fat prolapsed through Tenon's capsule at a similar position, which may occur in the elderly.<sup>[2]</sup> Isolated dermolipomas appear to occur sporadically with no specific inheritance. However, in association with Goldenhar's syndrome, a positive family history is occasionally obtained.<sup>[4][5]</sup> In this case series we evaluated the surgical outcomes of dermolipoma removal by simple excision method. Diagnosis was made on the basis of clinical picture and imaging techniques (NCCT or CECT).

10 patients were selected who had dermolipomas without any pre-auricular appendages, facial and

palatal clefts, or postural abnormalities or any systemic symptoms. The extra-ocular movements, both anterior and posterior segments were assessed. CT scan demonstrated a Crescent-shaped epibulbar fat density mass of variable size at the temporal aspect anterior to the insertion of the lateral rectus muscle and inferolateral to the lacrimal gland with no continuity to the intraconal fat.

Patients were followed up on Post op Day 1, 7, 14 and 1<sup>st</sup> month.

### SURGICAL PROCEDURE

2% lidocaine with 1:100 000 epinephrine was injected under the bulbar conjunctiva around the mass. Careful dissection of the conjunctiva was done to preserve healthy conjunctiva. The conjunctival tissue densely adherent to the underlying solid mass was excised together with the dermolipoma and subtotal excision of the mass was performed. It was ensured that lateral rectus muscle sheath, the levator and Müller's muscle complex, or the lacrimal ductules were not damaged. The specimen collected were sent for histopathologic examination. After resection, the conjunctival defects were reconstructed and sutured with 6-0 vicryl.

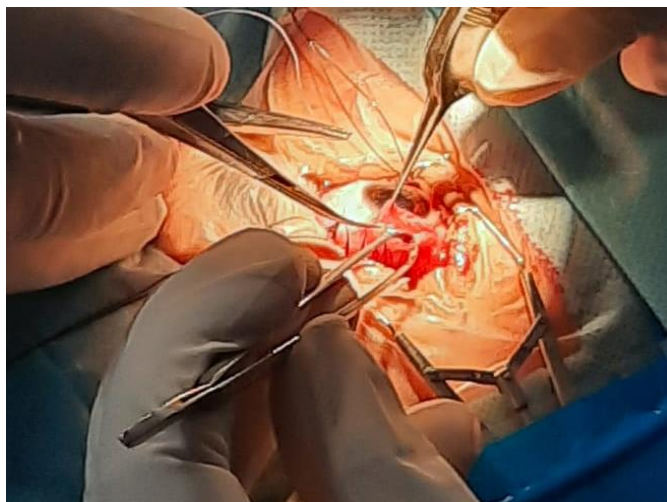
The histo-pathological examination revealed lobules of mature adipocytic clusters separated by collagenous stroma with scattered blood vessels – the findings which are consistent with conjunctival dermolipoma.

After surgery, a combination of antibiotic-steroid eye drops were given in a tapering dose for 4 weeks.

- **CASE 1** : 18 year old boy with dermolipoma in temporal region of right eye with size 10\*7\*4 mm<sup>3</sup> in CT scan. Post op Day 1 showed healthy wound site with 1 loose suture and subconjunctival haemorrhage. Post op Day 14 showed normal extraocular movements and no complications on 1st month of follow up.
- **CASE 2** : 62 year old male with dermolipoma in superotemporal region of right eye measuring approx. 12\*10\*4 mm<sup>3</sup> in CECT scan. Post-op Day 1 showed healthy wound site and sutures in situ. Post-op 1st month showed normal extraocular movements and no complications
- **CASE 3** :53 year old male, dermolipoma over temporal region of right eye measuring approx. 25\*15\*5 mm<sup>3</sup> on CT scan. Pre-op extraocular movements – Mild restriction on temporal, superotemporal and inferotemporal direction. Post-op Day 1 showed healthy wound site and subconjunctival haemorrhage. Post-op Day 14 showed normal extraocular movements and no complications.
- **CASE 4** :35 year old male, dermolipoma over temporal region of left eye measuring about 15\*10\*5mm<sup>3</sup>CT scan. Pre-op extraocular movements – mild restriction over temporal direction. Post-op Day 1 showed healthy wound site with sutures in situ, conjunctival congestion and subconjunctival haemorrhage. Post-op Day 14 showed normal extraocular movements and no complications.
- **CASE 5** : 18 year old female, dermolipoma over temporal region of left eye measuring about 10\*7\*3 mm<sup>3</sup> in CT scan. Post-op Day 1 showed healthy wound site and subconjunctival haemorrhage. Post-op Day 14 showed normal extraocular movements and no complications.
- **CASE 6** : 45 year old male, dermolipoma over temporal region of right eye measuring about 12\*6\*3 mm<sup>3</sup> on CT scan. Post-op Day 1 showed healthy wound site and subconjunctival haemorrhage. Post-op Day 14 showed normal extraocular movements and no complications.
- **CASE 7** : 38 year old female, dermolipoma over left eye measuring about 7\*5\*3 mm<sup>3</sup> in CT scan. Post-op Day 1 showed subconjunctival haemorrhage and post-op Day 14 showed no complications.
- **CASE 8** :30 year old female with dermolipoma over right eye measuring about 5\*4\*3 mm<sup>3</sup> in CT scan. Post-op Day 1 showed conjunctival congestion. Post-op Day 14 showed no complications.
- **CASE 9** :43 year old male with dermolipoma over right eye measuring 20\*12\*5 mm<sup>3</sup> on CT scan. Post-op Day 1 showed subconjunctival haemorrhage and healthy wound site. Post-op Day 14 showed normal extraocular movements and no complications.
- **CASE 10** : 16 year male with dermolipoma over left eye measuring 8\*8\*4 mm<sup>3</sup> in CT scan. Post-op Day 1 showed subconjunctival haemorrhage and Post-op Day 14 showed normal extraocular movements and no other complications.



**PHOTO 1: Dermolipoma right eye**



**PHOTO 2: Excision of Dermalipoma**



**PHOTO 3: Post operative Day 1, post dermolipoma excision**



**PHOTO 4: Post operative Day 14**

**RESULTS**

**Table 1: Age distribution**

| <b>AGE (in years)</b> | <b>NUMBER OF PATIENTS</b> |
|-----------------------|---------------------------|
| 0 – 20                | 3                         |
| 20 – 40               | 3                         |
| 40 – 60               | 3                         |
| 60 and above          | 1                         |

**Table 2: Gender distribution**

| SEX    | NUMBER |
|--------|--------|
| Male   | 7      |
| Female | 3      |

**Table 3: Laterality distribution**

| LATERALITY | NUMBER |
|------------|--------|
| RIGHT EYE  | 6      |
| LEFT EYE   | 4      |

**Table 4: Distribution of complications in Post-op patients**

| COMPLICATIONS                                     | DAY 1     | DAY 14  | DAY 28 |
|---|-----------|---------|--------|
| Congestion  | 10 (100%) | 0       | 0      |
| Subconjunctival haemorrhage                       | 9 (90%)   | 1 (10%) | 0      |
| Extrocular movements (restriction in medial gaze) | 7 (70%)   | 2 (20%) | 0      |
| Others  | 0         | 0       | 0      |

## DISCUSSION

In our study, majority of the patients were male in the age group of 30 – 60 years. 60 % of the patients had right eye involvement. All patients had moderate to severe conjunctival congestion, majority had subconjunctival haemorrhage and mild - moderate restriction of ocular movement especially in the medial gaze in 1st week post-operatively. Other complications like wound infection, visual impairment, ptosis and permanent restriction of ocular movements were not seen.

The study focused on evaluating the outcomes of simple excision of dermolipomas, its effectiveness and implications of the surgical approach. The results indicate a high rate of success in achieving complete removal of dermolipomas, with minimal complications observed during and after the procedure. The removal of the surface epithelium as well as the underlying solid components runs the risk of symblepharon formation and other complications like dry eye, ptosis and diplopia.<sup>[5]</sup> It also contributes to optimal aesthetic and functional outcomes for patients. And to achieve the best cosmetic outcome, it is important to perform complete surgical excision while preserving the surrounding healthy tissues.<sup>[6]</sup>

Surgical treatment is only indicated when the existing lipodermoid disturbs the patient either functionally or aesthetically.<sup>[7]</sup> Small dermolipomas need minimal resection of the overlying conjunctiva and primary conjunctival closure without using any flap. Extensive excision of an adequate portion of the tumour and the thickened overlying epithelium and subsequent reconstruction with a rotational conjunctival flap is required in cases of large dermolipomas which are adherent to the conjunctiva.<sup>[8]</sup>

## CONCLUSION

In conclusion, our research emphasizes the efficacy of simple excision as a reliable and safe method for

dermolipoma removal. The positive patient feedback and the absence of major complications in our study suggest that simple excision stands as a well-tolerated surgical intervention for dermolipomas, benefiting patients both functionally and aesthetically.

**CONFLICTS OF INTEREST: NIL**

**FINANCIAL SUPPORT: NIL**

## REFERENCES

1. Early results of surgical management of conjunctival dermolipoma: partial excision and free conjunctival autograft. Choi YJ, Kim IH, Choi JH, Lee MJ, Kim N, Choung HK, Khwarg SI. *Br J Ophthalmol.* 2015;99:1031–1036.
2. Epibulbar osseous choristoma within a dermolipoma: case report and literature review. Herdiana TR, Takahashi Y, Valencia MR, Ana-Magadia MG, Ishikawa E, Kakizaki H. *Orbit.* 2019;38:407–411.
3. Eijpe AA, Koornneef L, Bras J, et al. Dermolipoma: characteristic CT appearance. *Doc Ophthalmol* 1990;74:321–28 4.
4. McNab AA, Wright JE, Caswell AG. Clinical features and surgical management of dermolipomas. *Aust N Z J Ophthalmol* 1990;18:159 – 62
5. Clinical features and surgical management of dermolipomas, Alan A. McNab, John E. Wright , Anthony G. Caswell <https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1442-9071.1990.tb00608.x>
6. Maeng HS, Lee LK, Woo KI, Kim YD: A unique case of dermolipoma located in the lower eyelid . *Ophthalmic PlastReconstr Surg.* 2010, 26:288-9. 10.1097/IOP.0b013e3181bc7373
7. Flaka, S. , Mire, H. , Fitore, S. , Fjolla, S. and Avdyl, S. (2020) Surgical treatment of Lipodermoids - Case Report. *Open Journal of Ophthalmology*, 10, 1-9. doi: [10.4236/ojoph.2020.101001](https://doi.org/10.4236/ojoph.2020.101001).
8. Ho-Seok Sa, Hyoung Kyun Kim, Jae Ho Shin, Kyung In Woo and Yoon-Duck Kim. Dermolipoma surgery with rotational conjunctival aps *Acta Ophthalmol.* 2012; 90: 86–90.