

# Conjunctival Eyelashes: A Rare Presentation of Dermoid

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**Purpose:** To describe a previously unreported presentation of a conjunctival dermoid.

**Case Report:** An 8-year-old girl presented with a progressively enlarging mass in the right conjunctival fornix composed of normal appearing eyelashes. The patient had a history of aberrant conjunctival eyelash growth that had caused recurrent conjunctivitis in her right eye over the past few years. The mass was surgically removed and the pathology report revealed it to be a conjunctival dermoid. The patient had an excellent surgical result with normal cosmetic appearance.

**Conclusion:** Mature hair follicle growth from the conjunctiva is another possible presentation of a conjunctival dermoid that can be cured by simple surgical excision.

**Keywords:** Conjunctival Dermoid; Choristoma; Eyelash and Hair

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## INTRODUCTION

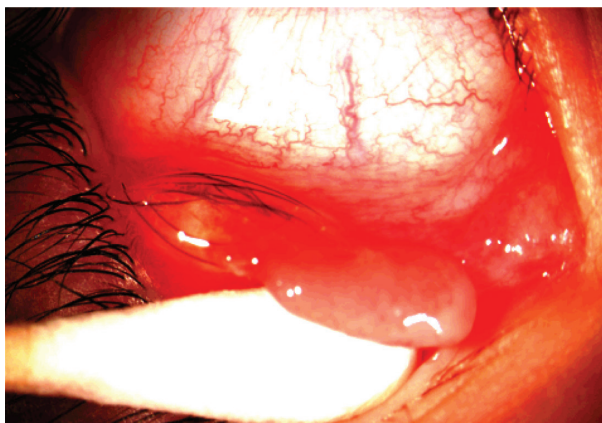
Dermoids are the most common orbital tumor of childhood.<sup>1</sup> This mass can have numerous ocular presentations and can occur in a variety of locations; the classic example is lesions occurring on the superotemporal orbital wall. Dermoids have also been reported on the inferotemporal cornea, the caruncle and the conjunctiva.<sup>2,3</sup> While these heterogeneous presentations are classified under the general heading of dermoid, depending on the location, each can have a different underlying histology. Proper identification of dermoid type can be important both for preoperative surgical planning and postoperative prognosis. The following case describes a previously unreported presentation of a conjunctival dermoid.

## CASE REPORT

An 8-year-old Hispanic girl was referred to our institution for a growth in her right conjunctival

fornix. Her mother had noticed the mass over the past few months and felt that it was enlarging. Our patient did not have any other medical conditions and denied undergoing prior trauma or surgery. Her only ocular history involved multiple, recurrent episodes of redness in the right eye that were diagnosed and treated as either bacterial or viral conjunctivitis by the referring physician. The mother also reported that she had discovered pieces of hair in her daughter's right eye tear film over the past couple of years.

On presentation, the patient's eye looked relatively normal, and she had uncorrected visual acuity of 20/20 in both eyes, with an otherwise unremarkable gross examination. Slit lamp examination of her right eye revealed a mildly injected palpebral conjunctiva with a moderate-sized, fibrous, tan-colored mass that had arborizing, centrally coursing blood vessels. Upon manipulation of the mass, a large tuft of normal appearing eyelashes emanated from the inferior conjunctival fornix (Figure 1).



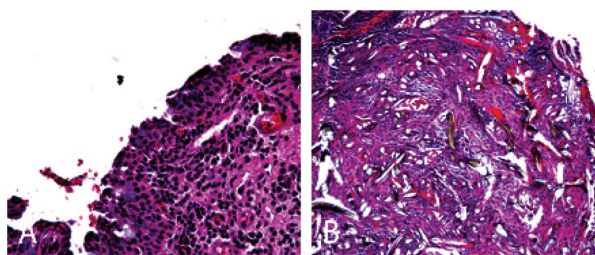
**Figure 1.** Pre-operative appearance of the lesion.

The mass was easily mobile, firm and non-fluctuant, so a decision was made to surgically remove the mass. The patient was taken to the operating room, and the base of the mass was carefully resected with sharp Westcott scissors. The tumor had a wide based pedicle and was easily removed. The specimen was placed in formalin and sent to pathology for analysis. The remaining conjunctival edges were easily reapproximated without tension, so no sutures were placed. On post-operative day one, the patient was comfortable and the conjunctival fornix was completely healed. She returned for her post-operative month one visit and had a pristine inferior conjunctival fornix, without any evidence of tumor recurrence.

The pathology specimen revealed nonkeratinized stratified squamous epithelium with multiple goblet cells and an underlying chronic mononuclear inflammatory cell reaction. The bulk of the lesion was made of relatively loose, irregular connective tissue with multiple small hair shafts in longitudinal and transverse cross-section and a small amount of adipose tissue. The pathology report was consistent with dermoid choristoma of the conjunctiva (Figure 2).

## DISCUSSION

The differential diagnosis for a pediatric conjunctival tumor includes nevi (64%), choristomas (10%), vascular tumors (7%), juvenile xanthogranulomas (JXG) and lymphoid masses.<sup>4</sup> The presence of normal conjunctival



**Figure 2.** (A): Periodic acid-Schiff (PAS) staining revealed a non-keratinizing stratified squamous cell epithelium with interspersed goblet cells. (B) 40x PAS stain shows multiple longitudinal and transverse cross-sections of hair shafts.

epithelium, hair shafts, and adipose tissue in our patient was consistent with a choristoma. The clinical picture of the tan, fibrous mass with central vessels could have been mistaken for a pyogenic granuloma, but the patient had no history of surgery or trauma, and histopathology did not report any granulation tissue.

Our patient's dermoid was composed of sequestered conjunctival tissue and not typical epidermal tissue. A literature search for "Dermoid Choristoma", "Conjunctival Dermoid", and "Corneal Dermoid" revealed two types of dermoids: conjunctival and epidermal. The main distinction between these two dermoid types depends on the presence or absence of two elements: keratin and goblet cells. Conjunctival dermoids have goblet cells interspersed amongst non-keratinized stratified squamous cells. In contrast, epidermal dermoids are composed of keratin producing stratified squamous cells without any goblet cells. While initially, this seems like a rather small distinction, there are a few salient features worth noting.

Conjunctival dermoids are rare tumors with Martinez et al finding only 14 cases in the literature in 1998.<sup>5</sup> We found no other cases in the literature since then and this case is the first described one presenting with externalized hair follicles in the conjunctival fornix. The largest case series published in the literature involved 7 cases over a 50-year period. Jekobiec et al reviewed all dermoid cysts at their institution from 1929 to 1977 and reanalyzed the corresponding pathology slides to confirm or refute the original diagnosis.<sup>1</sup> Twelve of the 128 cases were given a new diagnosis because

they had a non-keratinized cyst lining with conjunctival elements. Of these 12, five were determined as cysts and the other seven were classified as dermoids; the distinction between the two depended on the presence or absence of adnexal structures. These seven conjunctival dermoids were noted to be unique in that they presented in a different location (superonasal vs. superotemporal) compared to epidermal dermoids, and did not cause adjacent bony defects on radiography. The authors also mentioned how easily these tumors were removed because they had no surrounding attachments. Similarly, our patient's surgery was relatively simple and she enjoyed an excellent result. Orbital and corneal limbal dermoids are made of keratin producing epithelial cells, with the former causing bony erosion, and both are much more difficult to remove as compared to our experience and that of Jakobiec et al.<sup>6</sup> Understanding the distinction between the two types of dermoids can be important for both pre-operative surgical planning and patient counseling.

In conclusion, mature hair follicle growth from the conjunctiva is another possible

presentation of a conjunctival dermoid that can easily be cured by simple excision.

#### **Conflicts of Interest**

None.

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