MEAJO Middle East African Journal of Ophthalmology

Current issue
Instructions
Submit article

Middle East Afr J Ophthalmol. 2015 Oct-Dec; 22(4): 528–530.

PMCID: PMC4660547

doi: 10.4103/0974-9233.167825

Lipodermoid Cyst: A Report of a Rare Caruncular Case

Mohammad Taher Rajabi and Koosha Ramezani[1]

Department of Ophthalmic Plastic and Reconstructive Surgery, Eye Research Center, Farabi Eye Hospital, Tehran University of Medical Sciences, Tehran, Iran

[1]Department of Ophthalmology, Eugene and Marilyn Glick Eye Institute, Indiana University, Indianapolis, IN, USA

Corresponding Author: Dr. Koosha Ramezani, Department of Ophthalmology, Eugene and Marilyn Glick Eye Institute, Indiana University, 1160 W Michigan Street, Indianapolis, IN, 46202, USA. E-mail: k.ramezani@outlook.com

Abstract

Ocular lipodermoid cysts and solid dermoid tumors are choristomas which are described as normal tissue growth in an abnormal location. Congenital epibulbar lipodermoid comprises adipose tissue that is covered by connective tissue. They are usually located superotemporally, and basically tend not to involve the peripheral cornea. If the dermoid or lipodermoid is accompanied by other systemic conditions or ocular anomalies in young children, a consultation with an Internist or pediatrician is required to rule out Goldenhar syndrome which is a oculoauriculovertebral dysplasia. This paper reports a unilateral lipodermoid cyst which is remarkable regarding its caruncular origin, in an otherwise healthy adult female.

Keywords: Epibulbar Choristomas, Goldenhar Syndrome, Lipodermoids

INTRODUCTION

Ocular choristomas are congenital lesions presenting as mature and normal tissue in an abnormal site. They include limbal dermoid, lipodermoid, ectopic lacrimal gland, and episcleral osseous choristoma.[1] Lipodermoids and dermoids are the most common orbital and epibulbar tumors in children. They can affect different areas of the eye, in particular the cornea, limbus, and bulbar conjunctiva.[2]

Lipodermoids are usually found near superior temporal quadrant of the globe that may be quite large and extend backward and forward, however, tend not to affect the peripheral cornea.[3] Histologically, a lipodermoid is adipose tissue which is covered by connective tissue. Whereas a dermoid is comprised of collagen connective tissue covered by epidermal epithelium.[1]

Dermoid or a lipodermoid may be associated with Goldenhar syndrome that appears as oculoauriculovertebral dysplasia. It is characterized by ocular lipodermoid or dermoid, preauricular skin appendages, fistulas, and vertebral malformations (scoliosis, spina bifida, or vertebral fusion).[1]

This paper reports a case of unilateral lipodermoid cyst, which is notable with regards to its caruncular origin in a 21-year-old female.

CASE REPORT

A 21-year-old female presented to the Farabi Eye Clinic with a chief complaint of a white bump on the right eye. The patient did not mention any other ocular problems and had no past history of medical or ocular lesions. There were no known allergies or drug use. The patient did not present with any other congenital abnormalities. There were no preauricular appendages, facial or palatal clefts, or postural abnormalities. The patient was free of any systemic symptoms.

On examination, the extraocular muscle motility was normal. Pupils were round, equal, reactive, and with no afferent pupillary defect. A detailed fundus examination revealed an unremarkable optic disk, free of lesions normal maculae and peripheral fundi with reflexes present as well. On slit-lamp examination, the corneas were clear, the anterior chambers were deep without cells or flare and the lenses were clear.

A whitish avascular lesion of approximately 10–12 mm was present over the caruncular region of the right eye [Figure 1]. The lesion had increased in size to some extent during childhood, and progression stopped thereafter.

The lesion was surgically excised. The surgical approach for lesion excision was as follows: Under general anesthesia, following an incision between plica semilunaris and caruncle, the dissection was made between the mass and mucosa and adhesions between the conjunctiva, plica, and caruncle were released. The mass was tightly attached to the caruncular tissue and fine dissection with Westcott scissors was performed to save the caruncle, though most parts of the caruncle were involved. The mass was extended deeply in the medial part but there was no adhesion to deep tissues such as medial rectus and sclera. Followed by dissection, the medial aspect of the mass was released using Stevens scissors. After the mass excision, an incision was sutured with 8.0 Vicryl suture. Our clinical suspicion of a lipodermoid was confirmed by histopathologic examination [Figure 2].

DISCUSSION

Epibulbar dermoids and lipodermoids are choristomas which contain epithelium derived tissues.[1] Dermolipoma, which has been used synonymously with lipodermoid, exhibits a yellow clinical appearance because of its deep fatty layer.[3] The case of lipodermoid cyst that we are reporting is unique because of its caruncular location in an adult female.

In the presence of lipodermoids and any other ocular abnormalities or systemic conditions, it is essential to consider Goldenhar-Gorlin syndrome.[4]

This rare congenital syndrome occurs sporadically and is not inherited. However, genetic transmission (autosomal dominant) and chromosomal abnormality have also been reported.[5,6]

The syndrome was first introduced by Goldenhar in 1952 and is characterized by ocular anomalies, auricular appendages, aural fistula, and vertebral anomalies.[7] Dermoid or lipodermoid cysts are the major ocular features of Goldenhar syndrome that are usually located in the inferotemporal quadrant and are most often unilateral.[8,9]

Dermoids are known to be more associated with Goldenhar syndrome. In one study, 57 cases of Goldenhar syndrome were evaluated at a pediatric service and 32% presented with epibulbar dermoids or lipodermoids and 6% had nasal upper eyelid colobomas, all of which were limbal dermoids rather than central.[4] In addition to the main ocular manifestation, there may be other anomalies including, eyelid coloboma, aniridia, strabismus, and micro-ophthalmus.[1]

An expanded form of this syndrome (Goldenhar-Gorlin) is very rare and presents with facial clefting, mandibular hypoplasia, cardiac or pulmonary anomalies, and mental retardation which requires early medical

intervention.[3]

A large pathologic study reviewed 2455 excised conjunctival lesions in patients 15 years of age and older, among which 2.2% were congenital lesions and 1.2% were choristomas. Dermoid lesions were more than twice as common as lipodermoids.[3]

Squamous cell carcinoma, complex lacrimal corneal choristomas, epithelium, or orbital fat herniation are lesions from which lipodermoids must be differentiated.

Squamous cell carcinoma is a rapidly growing malignant lesion which can deeply penetrate the ocular tissues. It mostly involves the limbal region and is much more common in elderly males who live in areas with exposure to high levels of ultraviolet-B radiation. Simple excision with adequate margin is considered the essential treatment.[1]

Complex lacrimal corneal choristomas are segmental, translucent, and highly vascular lesions that can be seen isolated, unilateral, or bilateral. They may contain smooth muscle and cartilage, and must be differentiated from dermoids and lipodermoids. Once on the cornea, the mass can extend deep into the stroma that makes excision difficult.[3]

Epithelial epithelioma is considered an *in situ* carcinoma which is usually located at the limbus.

In association with several tufted blood vessels, they can be a premalignant lesion requiring excision.

Herniation of orbital fat is generally considered a consequence of the aging process. This noncongenital lesion may appear similar to lipodermoids, nevertheless is seen in the superior fornix as the lid is lifted.[1]

Lipodermoid cysts and solid dermoid tumors usually involve the epibulbar conjunctiva. In two retrospective histopathologic studies of caruncular lesions, dermoids were rarely recorded.[3] The current case is unique, due to the caruncular origin of the lipodermoid cyst. Ghafouri *et al*. have reported a caruncular dermoid attached to the upper eyelid, accompanied by epibulbar bleeding.[10]

Lipodermoids rarely need surgical excision. In our case, the caruncular lipodermoid cyst was excised regarding cosmesis. Excision can also be done when lipodermoids affect proper lid function.[3]

Lipodermoids are generally located superotemporally.[1] To the best of our knowledge, this case of lipodermoid was unique because of its caruncular location.

It is necessary to reassure these patients that the condition has a benign nature. In this case, there were no signs of any other ocular abnormalities. A consultation with an internist was carried out though this 21-year-old female did not have any signs of Goldenhar-Gorlin syndrome. The ophthalmic condition was followed up 1-week after the surgery.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Balogh M. Lipodermoid: A case report. Clin Eye Vis Care. 1995;7:79–82.

2. Elsas FJ, Green WR. Epibulbar tumors in childhood. Amyloid. 1975;1:05.

3. Jakobiec FA, Pineda R, Rivera R, Hsu-Winges C, Cherwek D. Epicorneal polypoidal lipodermoid: Lack of association of central corneal lesions with goldenhar syndrome verified with a review of the literature. Surv Ophthalmol. 2010;55:78–84. [PubMed: 19783022]

4. Mansour AM, Wang F, Henkind P, Goldberg R, Shprintzen R. Ocular findings in the facioauriculovertebral sequence (Goldenhar-Gorlin syndrome) Am J Ophthalmol. 1985;100:555–9. [PubMed: 4050929]

5. Choong YF, Watts P, Little E, Beck L. Goldenhar and cri-du-chat syndromes: A contiguous gene deletion syndrome? J AAPOS. 2003;7:226–7. [PubMed: 12825068]

6. Stoll C, Viville B, Treisser A, Gasser B. A family with dominant oculoauriculovertebral spectrum. Am J Med Genet. 1998;78:345–9. [PubMed: 9714437]

7. Vinay C, Reddy RS, Uloopi KS, Madhuri V, Sekhar RC. Craniofacial features in Goldenhar syndrome. J Indian Soc Pedod Prev Dent. 2009;27:121–4. [PubMed: 19736507]

8. Bhallil S, Benatiya I, El Abdouni O, Mahjoubi B, Hicham T. Goldenhar syndrome: Ocular features. Bull Soc Belge Ophtalmol. 2010;316:17–9. [PubMed: 21305808]

9. Baum JL, Feingold M. Ocular aspects of Goldenhar's syndrome. Am J Ophthalmol. 1973;75:250–7. [PubMed: 4697181]

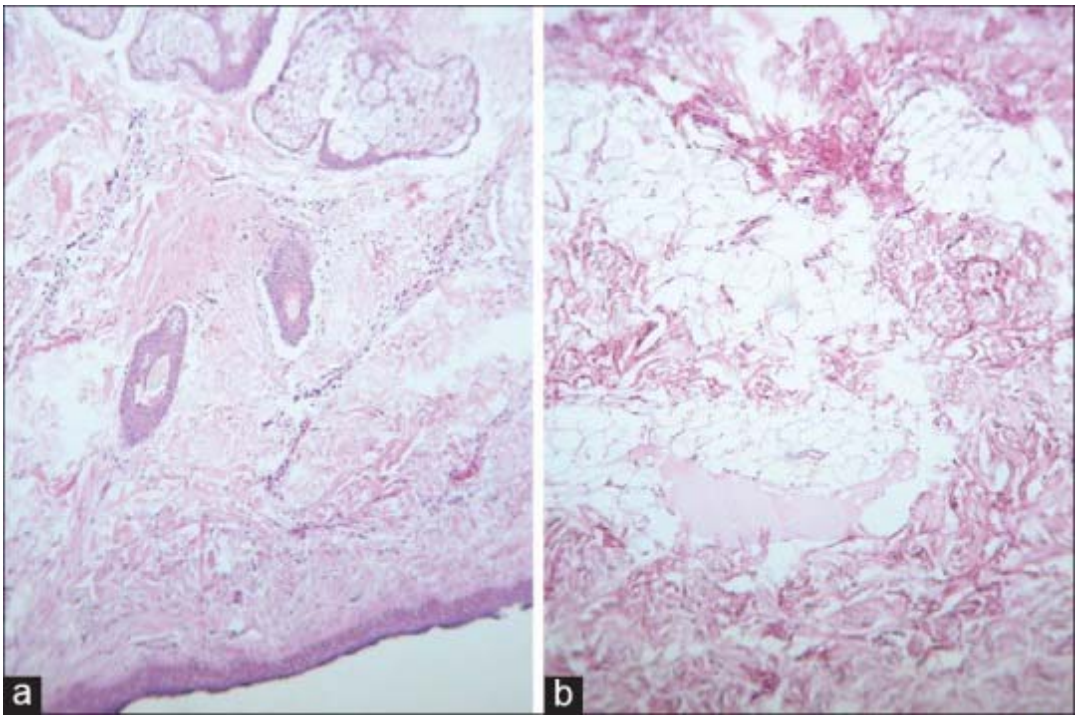
10. Ghafouri A, Rodgers IR, Perry HD. A caruncular dermoid with contiguous eyelid involvement: Embryologic implications. Ophthal Plast Reconstr Surg. 1998;14:375–7.

Figures and Tables

Figure 1

Lipodermoid cyst. External photograph showing whitish avascular lipodermoid lesion arising from the right caruncle

Figure 2



(a) Histologic section of the lesion, showing the adipose tissue covered by connective tissue matrix, (b) histologic section of the lesion, showing the adipose tissue covered by connective tissue matrix