



CYSTIC LESIONS OF CONJUNCTIVA - A CLINICOPATHOLOGICAL STUDY

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**ABSTRACT**

**AIM:** This is a clinical study of histologically proven conjunctival cysts to document the different varieties, clinical presentation and their surgical management.

**MATERIAL AND METHODS:** Fifty one (51) Patients who presented with cystic lesions of the conjunctiva to the department of the Oculoplastics and Orbital diseases, Sarojini Devi Eye hospital were studied over a period of two years from August 2015 - July 2017. A thorough clinical evaluation was done for all the patients and surgical excision was carried out after basic haematological investigations. All the specimens were subjected for histopathological examination

**RESULTS:** The various types of conjunctival cysts found in our study were Inclusion cyst 16, Ductal cyst 11, Epidermoid and Dermoid cysts 10, Dacryops 7, parasitic cyst 3, Cystic Pterygium 4. The common symptoms with which patients presented were presence of swelling, foreign body sensation, ocular motility restriction and cosmetic disfigurement. No recurrences of the lesions were noted so far.

**CONCLUSION:** Meticulous surgical procedure used in careful and intact removal of cysts prevents any recurrence which is the main post operative concern for the surgeon.

**KEYWORDS :** Conjunctival cysts, Ductal cyst, Parasitic cyst, Dacryops

**INTRODUCTION**

Conjunctival cysts are congenital or acquired fluid filled epithelium lined cavities with in bulbar conjunctiva or conjunctival fornix. Primary cyst are usually congenital and secondary conjunctival cysts are either parasitic, degenerative and implantation cysts<sup>1,2,3</sup> They are usually asymptomatic and slowly progressing but can cause cosmetic disfigurement, foreign body sensation, reduced ocular motility and an unstable tear film. Complete surgical removal is the definitive treatment and as the cysts are thin walled and can rupture during excision, a careful and intact removal of cysts is mandatory.

**MATERIAL and METHODS**

This is a retrospective study of 51 patients who presented with cystic lesions of the conjunctiva to the department of the Oculoplastics and Orbital diseases, Sarojini Devi Eye hospital over a period of two years from August 2015 - July 2017. A detailed clinical evaluation which included history taking ,visual acuity recording, slit lamp and fundus examination, B-scan and CT where required was done for all the patients . A careful surgical excision was done under local / general anaesthesia (for children) and all the excised cysts were subjected to detailed histological evaluation to confirm the diagnosis. Most of the patients were followed for a period of 6-9 months for any recurrence or complications.

**OBSERVATIONS**

A total of 51 patients and 52 lesions (one bilateral case of Dacryops) were studied.

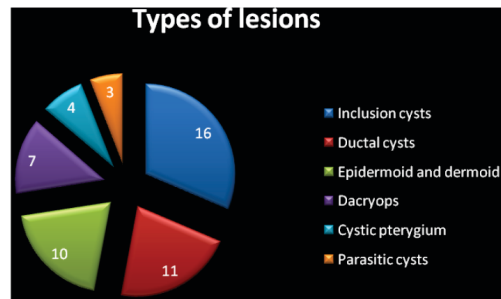
Of these 16 patients had inclusion cysts,11 patients Ductal cysts, 10 Epidermoid and Dermoid cysts, 7 had Dacryops, 4 patients cystic pterygium and 3 patients had parasitic cysts. [Table 1]

Of the 16 having conjunctival inclusion cysts, 14 were primary cysts and 2 patients developed cysts following cataract surgery in the superior quadrant.

**Talbe-1 Types of lesions**

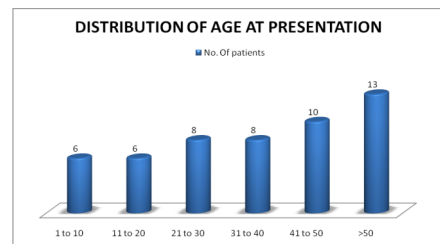
Types of lesion	No. of patients	Percentage
Inclusion cysts	16	30.76%
Ductal cysts	11	21.15%
Epidermoid and dermoid	10	19.23%

Dacryops	7	13.46%
Cystic pterygium	4	7.69%
Parasitic cysts	3	5.76%



**Graph-1 Types of lesions**

The age group of patients in our study ranged from 2 to 75 years with the size of the cysts between 5 to 24 mm.



**Graph-2 Distribution of age at presentation**

27 males, 24 females and 6 children of less than 10 years age were present in our study group(Graph-2).

Most of the patients presented with the symptoms of progressive increase in the size of the cyst, foreign body sensation, ocular motility restriction and cosmetic disfigurement.

**DISCUSSION**

Epithelial Inclusion cysts:(Figure-1,2,3)  
The inclusion cysts were the commonest type in our study accounting for 16 cases and 30.76% of all the cystic lesions in our study(Table-1, Graph-1), which is similar to two other studies<sup>1,4</sup>.

The pathogenesis of inclusion cyst is embedding of conjunctival epithelium into deeper tissues usually following trauma. When there is conjunctival inflammation the epithelium becomes totally loose and proliferation of these cells results in the formation of cysts. Absence of history of trauma previously led to view that these cysts are of non traumatic origin<sup>5,6</sup>. But trauma to conjunctiva is quiet common and the patient might not give importance to these facts as it does not produce much discomfort or symptoms.

There was no definite history of trauma or surgical intervention in 14cases. The size of the cysts varied from 5mm to 24 mm and they were located in superonasal quadrant, lower fornix and in bulbar conjunctiva. In one patient who had small incision cataract surgery presented with a large fluid filled clear cystic lesion at superior bulbar conjunctiva which was causing restriction of elevation. Complete removal of cyst was done in all cases and sent for Histopathological examination.

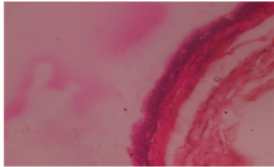


Figure 1



Figure 2

**Conjunctival Inclusion Cyst**

M/E: Shows cyst wall lined by conjunctival epithelium. Primary Conjunctival inclusion Cyst Lumen contains clear fluid

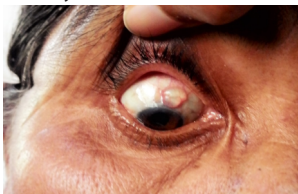


Figure 3

Secondary Conjunctival Inclusion Cyst following SICS

**Ductal cysts(Figure-4,5)**

This is the second commonest cystic lesion in our study and was not-reported from many studies. "A clinicopathological study of excised conjunctival lesions" an article published in Middle East, reported an incidence of 70 percent for ductal cysts<sup>7</sup>. In our study there were 11 cases of Ductal cysts accounting for 21.15% of all cystic lesions in our study 5 of them near medial canthus, 3 near lateral canthus and 3 in the lower fornix.

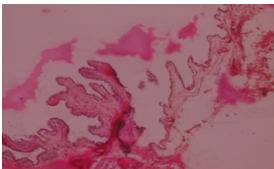


Figure 4  
Ductal Cyst

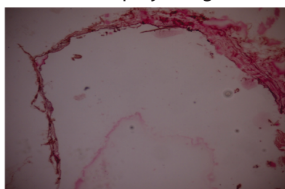


Figure 5  
Ductal Cyst

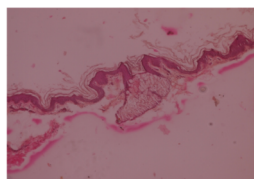
M/E: Shows a ductal cyst lined by double layer of epithelium

**Epidermoid and dermoid cysts (Figure-6,7)**

This is the third most common cystic lesion encountered in our study accounting for 19.23 percent.The dermoids were situated either at the limbus or at the lateral canthus. They were spherical with smooth surface and the cut surface contained cheesy material or hair follicles projecting from them.



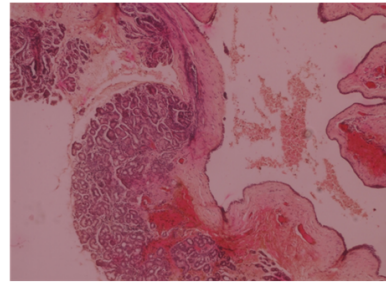
Epidermoid cyst  
M/E: Shows cyst lined by stratified squamous epithelium. No adhesal elements seen in the wall



Dermoid Cyst  
M/E: shows cyst lined by stratified squamous epithelium with dermal adnexae (sebaceous glands) in the wall. Lumen shows keratinous material

**Dacryops: (Figure-8)**

There were 7 cases of dacryops in our study , one patient having bilateral cysts. Obstruction of the lacrimal gland ductules leads to the formation of dacryops, most commonly presenting unilaterally in the palpebral lobe. The cysts were smooth walled, bluish coloured present in the supero temporal aspect of the eye.



Dacryops: Lacrimal Gland Cyst

M/E:Shows cyst lined by double layer of cuboidal epithelial cells and shows lobules of lacrimal gland tissue in the wall.

Figure 8

**Parasitic cysts: (Figure-9,10)**

3 cases of cysticercosis were present in our study.They were situated on the nasal side, their sizes ranging from 15-20 mm with progressive increase in the size of the swelling being the only complaint. They were looking whitish yellow with a chalky white spot in the cavity representing the scolex of the parasite<sup>8</sup>.

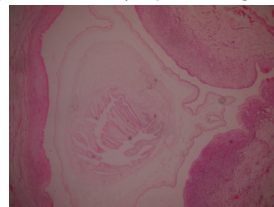


Figure 9



Figure 10

Cysticercosis. Cyst with embedded parasite and chronic inflammatory cell infiltrate in the cyst wall

**Cystic pterygiums (Figure-11)**

In all the 4 cases in our study cystic changes were present in the head of the pterygium and there were no adhesions to the underlying structures<sup>9</sup>.



Figure 11

**CONCLUSIONS**

Meticulous surgical procedure used in careful and intact removal of cysts prevents any recurrences which is the main post operative concern for the surgeon.

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