

Orbital Cysts

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This paper presents incidence, presentation and management of Orbital Cysts in a study conducted from Nov 95 to April 98. A total of 164 cases were studied out of these 11 (6.7%) were Orbital cyst, 07 cases (63%) were Dermoid, 03 (27.2%) Benign Inclusion Cyst (Epidermoid) and 01 (9%) case of Hydatid Cyst. Orbital dermoid and hydatid cysts present with painless gradual proptosis. Surgery was the mainstay of treatment.

Key words: Orbital cyst, inclusion cyst, hydatid cyst

Orbital Cysts may be primarily present in the orbit or the orbit may be invaded by cysts from the neighbouring structures such as PNS. The primary orbital cysts commonly seen in different studies are hydatidosis, haematic, dermoid and sebaceous cysts with hyaline degeneration¹

Material & Methods

The study was conducted at the Institute of ophthalmology, King Edward medical College, Mayo Hospital Lahore Pakistan from Nov 95 to April 98. A total of 164 cases of orbital lesions were analyzed.

They were classified as neoplastic, inflammatory Cystic, traumatic and congenital. Every patient went through a standard protocol of detailed history, general physical examination, examination of eye, Orbit and sinuses. Special diagnostic procedures used were exophthalmometry, radiological studies, angiography, Orbital Ultrasonography (B - Scan), CT Scan & MRI. Excision biopsy was done where indicated.

Results

Analysis of 164 cases revealed that Orbital Tumours were the most common orbital lesions 129 (78.6%) followed by inflammatory 24 (14.6%) and cystic 11 (6%) lesions (Table I). Among the cystic lesions 7 (63.6%) cases were dermoid, 03 (27.2%) benign inclusion (Epidermoid) Cysts and 01 (9%) case of Hydatid Cyst (Table II)

Table 1: Orbital lesions (n=164)

	n=	%age
Orbital tumours	24	78.6%
Inflammatory lesions	24	14.6%
Cystic	11	6.7%

Table 2: Cystic lesions (n=11)

	n=	%age
Dermoid	07	63.6%
Epidermoid	03	27.2%
Hydatid	01	09.0%

Amongst the Dermoid 04 (57%) cases were limbal dermoid and 03 (43%) were orbital dermoid.

Epidermoidal Cysts includes 01 (33%) case of conjunctival & 02 (67%) cases of orbital Epidermoid.

Discussion

Cystic lesion typically are maximally or moderately adherent to the adjacent tissues, allowing blunt dissection and extirpation. In principle, the cystic lesion have the advantage of being collapsible, except in circumstances such as Ecchinococcus Cystic in with contents have a likelihood of orbital seeding. This property makes it easier to remove cysts of any size. One half to two thirds of the cysts should be dissected away from adjacent tissues using the tenting of the full cyst to help identify tissue planes before considering collapsing them⁴.

Like solid masses per-operative appearance of cystic masses can be analyzed in terms of two essential features¹ the relationship that mass has to adjacent tissues and (ii) Intrinsic nature of the cystic lesions itself. Non infiltrative primary cystic lesions such as Epithelial Cysts tend to be pale blue domed in appearance and often have a very distinct line of cleavage.

Cystic lesions associated with inflammation of the capsule and surrounding tissues such as dermoid cysts and some mucocoeles are characterized by a tendency to adhere to adjacent tissues but for the most part, they can be dissected free of them by careful blunt microsurgical techniques. The cysts that contain keratin or sebaceous debris tend to be yellow and may or may not have hair seen through their capsule²

Associated skin changes may provide important clues to diagnoses. Alteration in texture, Colour or thickness or feature such as loss of hair and increased or decreased pigmentation may imply different kinds of processes. A skin appearance that is often noted with cystic lesions is a slightly bluish discoloration and case of transillumination. Usually, cystic lesions are palpable and smooth margined and the skin overlying them move easily³

Dermoids are commoner between 3 - 10 years of age. Upper temporal site is the commonest. Usually they are anteriorly located⁵ Dermoid cyst though congenital in origin become apparent in late childhood.(1)Dermoid often when they have achieved a significant size, arc

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associated with erosion and yellowing of the adjacent bone and may be associated with discoloration of the adjacent tissues with a similar yellowish change and with microcysts that appear to contain clear droplets (similar to rendered fat)² Dermoid need to be carefully dissected from adjacent tissues, because many have areas of rupture with adhesions of planes between the cyst wall and adjacent tissues⁴

Multilocular Cyst are of two types, clear cysts and those that contain blood products. Clear Cysts are lined by epithelium and have appearance similar to unilocular cysts. These cysts are pale with either a bluish or grey – blue colouration of the fluid. Echinococcus cyst is one of multilocular cysts which characteristically has pale capsule but appear blue domed. One can often see the scoleces through the cystic and this is important to be recognized because rupturing may lead to orbital seeding². Orbital hydatid disease is rare and is caused by two species of dog tapeworm *Echinococcus granulosus* and *E. Multilocularis*. In O' Leary's series of 789 cases of hydatid disease she detected only 5 orbital cases. Awan & Shah in their studies of 1487 orbito-ocular tumors in Kenian African found that orbital hydatid accounted for 0.94% of their series of 249 cases⁶. Hydatid Cyst in countries where echinococcosis is common have shown to cause proptosis even lab. test for the disease were negative⁵ The majority of orbital Hydatid Cysts are located in the superonasal and lying in or about the muscle cone or posteriorly and infrolaterally causing varying degree of proptosis. Surgery is mainstay of Hydatid treatment. This could be done by methods described by Daghfous in which after extracting certain amount of hydatid fluid, hypertonic saline lavage of the

endocyst, followed by 1-2% formaline wash prior to the extirpation of the cyst.

Another method described by Awan which does not involve surgical extirpation of the cyst which is rather forced out by the mechanical effects of saline injections between the pericyst and endocyst. Furthermore there is no need for ablation of the pericyst layer as the whole ectocyst comes out intact with germinal membrane.⁶

Conclusion

Orbital cyst behave like orbital tumours by their mass effect. Partial dissection before evacuation and collapse may aid excision except for parasitic cysts that may need⁷. Orbital Ultrasonography plays important role in their pre operative diagnosis.

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