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OCULAR DISEASE

Dermoid Cyst



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Introduction

- An orbital dermoid cyst is a choristoma (a mass of histologically normal tissue in an abnormal location) derived from displacement of ectoderm to a subcutaneous location along embryonic lines of closure.
- Dermoids are lined by keratinized stratified squamous epithelium (like skin), have a fibrous wall and contain dermal appendages such as sweat glands, sebaceous glands and hair follicles.



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- Epidermoid cysts do not contain adnexal structures.
- Dermoids may be 'superficial' or 'deep', located anterior or posterior to the orbital septum respectively.
- Epibulbar dermoids and dermolipomas are related lesions



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Diagnosis

Symptoms

- **A superficial** orbital dermoid cyst presents in infancy with a painless nodule, most commonly located in the superotemporal and occasionally the superonasal part of the orbit
- **A deep dermoid** cyst presents in adolescence or adult life with a gradually increasingly protruding eye,

Signs

- **Superficial:** a firm round smooth non-tender mass 1–2 cm in diameter, mobile under the skin but usually tethered to the adjacent periosteum
- **Deep:** proptosis, dystopia or a mass lesion with indistinct posterior margins



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(A) *Superficial cyst left eye;*
(B) *left deep cyst causing mild dystopia*





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Investigation

Superficial

- Well-circumscribed heterogeneous cystic lesion

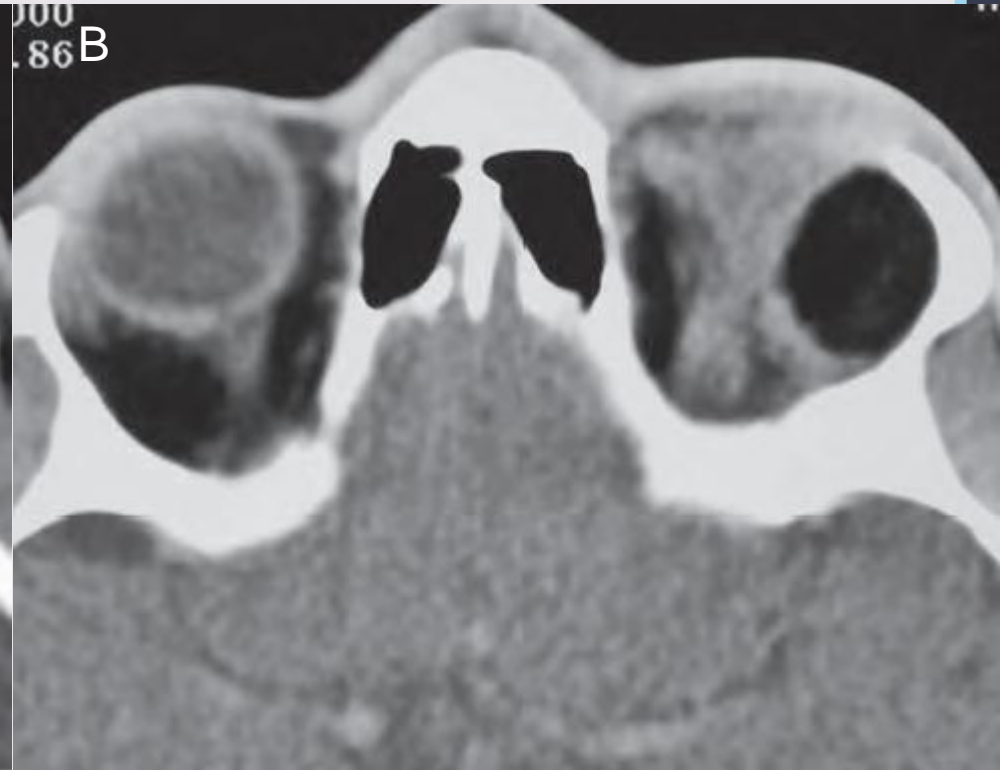
Deep

- well-circumscribed lesion
- Some deep dermoids, associated with bony defects



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(A) Axial CT image showing a well-circumscribed heterogeneous superficial lesion; (B) deep dermoid – CT showing a well-circumscribed cystic lesion and bone remodelling





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Treatment

Superficial dermoid

Treatment is by excision in toto, taking care not to rupture the lesion, since leaking of keratin into the surrounding tissue typically results in severe Granulomatous inflammation.

Deep dermoid

Excision in toto is advisable because deep dermoids enlarge and may leak into adjacent tissues inducing inflammation



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Superficial orbital dermoid cyst – appearance at surgery (orbitotomy)





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- Small lesions may be observed, bearing in mind the possibility of rupture, particularly from trauma; the inflammation can be addressed with oral steroids.