

Dermoid Cyst

WHAT IS A DERMOID?

A dermoid is an overgrowth of normal, non-cancerous tissue in an abnormal location. Dermoids occur all over the body. The ones in and around the eye are usually comprised of skin, hair, and/or fat [See figure 1].

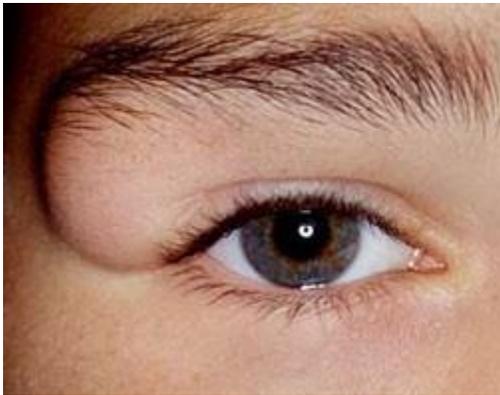


Fig. 1: A dermoid is an overgrowth of normal, non-cancerous tissue in an abnormal location.

WHERE ARE DERMOIDS FOUND AROUND THE EYES?

There are two main dermoid types that occur on or around the eyes. First, an orbital dermoid is typically found in association with the bones of the eye socket. Second, an epibulbar dermoid is found on the surface of the eye. There are two typical locations for an epibulbar dermoid. One of the locations is at the junction of the cornea, the clear part at the front of the eye, and the sclera, the white part of the eye. This is a limbal dermoid. The second location of an epibulbar dermoid is on the surface of the eye where the lids meet in the temporal corner (towards the ear) which is often called a dermolipoma or lipodermoid.

WHAT DOES AN ORBITAL DERMOID LOOK LIKE?

An orbital dermoid presents as an egg-shaped mass under the skin adjacent to the bones of the eye socket. The mass is smooth, firm, and not painful. The skin overlying the mass is normal in appearance. Dermoids can remodel the bone adjacent to them so that they often sit in a depression in the bone or may be fixed to the bone. Sometimes

dermoids are dumbbell-shaped, with one half of the mass on the outer part of the rim of the eye socket and the other part in the inside of the rim of the eye socket (next to the brain). Dermoids are cysts and are typically filled with a greasy material that is yellow in color.

WHERE ARE ORBITAL DERMoids USUALLY FOUND?

Orbital dermoids usually form in front of the bones surrounding the eye. They typically occur where two of the facial bones join to create the eye socket. Epidermal and dermal cells in this area become entrapped and form a cyst that slowly grows. The most common place for dermoids is in the upper and outer part of the eye socket near the end of the eyebrow. They can also occur adjacent to the nose but are rarely found in association with the bones in the lower part of the eye socket. Rarely, orbital dermoids are found more posteriorly in the eye socket.

DO ORBITAL DERMoids NEED TO BE REMOVED?

Rarely, dermoids can cause vision loss in the affected eye. There is a risk, however, that orbital dermoids can rupture and cause an inflammatory reaction. For this reason, the pediatric ophthalmologist will most often recommend that the dermoid be removed. An MRI scan may be ordered prior to surgical excision to evaluate the depth of the dermoid and to determine if it extends beyond the orbital rim.

HOW ARE ORBITAL DERMoids REMOVED?

The skin overlying the dermoid is opened and the surrounding tissues are dissected until the dermoid is revealed. The dermoid is then carefully dissected free from the surrounding tissue. The excised mass is typically sent to a pathologist who can confirm the identity of the tissue.

DO ORBITAL DERMoids CAUSE VISION LOSS?

Not usually.

ARE ORBITAL DERMoids FOUND IN ASSOCIATION WITH OTHER DISEASES?

No.

WHAT DOES A POSTERIOR EPIBULBAR DERMoid OR DERMOLIPOMA LOOK LIKE?

A posterior epibulbar dermoid is typically yellow in color and soft in consistency, molding to the curve of the eye. The conjunctiva overlying it may be thickened. Occasionally there is one or more hairs sticking out from the mass.

WHERE ARE POSTERIOR EPIBULBAR DERMoids (DERMOLIPOMAS) USUALLY FOUND?

Posterior epibulbar dermoids are usually found under the outer upper eyelid in the recess where the eyeball meets the eyelid. Depending on their size, they may be visible only when the upper lid is lifted or if larger they may be seen with the eyelids in the usual position.

DO POSTERIOR EPIBULBAR DERMoids NEED TO BE REMOVED?

They rarely require excision. If they are small and not bothersome to the patient or patient's family, posterior epibulbar dermoids can be left alone.

HOW ARE EPIBULBAR DERMoids REMOVED?

Posterior epibulbar dermoids are usually not attached to the eyeball itself. They are attached to the conjunctiva that covers the eye. They often extend posteriorly into the eye socket and usually cannot be entirely removed. Excision involves stripping the dermoid free of the overlying conjunctiva, clamping the mass at the most posterior extent of the dissection and removing the anterior part of the mass. The excised mass is typically sent to a pathologist who can confirm the identity of the tissue.

DO POSTERIOR EPIBULBAR DERMoids CAUSE VISION LOSS?

Not usually.

ARE POSTERIOR EPIBULBAR DERMoids ASSOCIATED WITH OTHER DISEASES?

Yes, sometimes. They can be found in persons with Goldenhar syndrome, linear nevus sebaceous syndrome, and encephalocraniocutaneous lipomatosis

WHERE ARE LIMBAL DERMoids USUALLY FOUND?

They are found on the surface of the eye either on the cornea or at the junction of the cornea and sclera [See figure 2].



Fig. 2: Limbal epibulbar dermoid.

DO LIMBAL DERMoids NEED TO BE REMOVED?

Limbal dermoids may be removed to improve the abnormal appearance of the eye and to decrease possible eye irritation.

HOW ARE LIMBAL EPIBULBAR DERMoids REMOVED?

The dermoids are removed in a surgical procedure in which the surgeon excises the dermoid from the surface of the cornea and sclera. Sometimes the dermoid extends into the sclera and/or the cornea and care must be taken to avoid entering the eye when excising them. After excision, the site where the dermoid lay can be covered by a piece of transplanted cornea.

DO LIMBAL DERMoids CAUSE VISION LOSS?

Occasionally the dermoid is so large that it blocks visual input from entering the eye. More often, vision loss can occur because the presence of the dermoid causes the cornea of the affected eye to have an irregular shape. This warping of the cornea can cause a large amount of astigmatism and a blurred image. The blurred image encourages the developing brain to ignore the input from the affected eye, thus causing vision loss through amblyopia. Fortunately, if amblyopia is detected early during childhood, it can often be successfully treated.

DOES THE RISK OF VISION LOSS GO AWAY AFTER THE DERMoid IS REMOVED?

Not typically. Even though the dermoid is gone, it has often permanently changed the shape of the cornea and the risk of developing amblyopia remains.



ARE LIMBAL DERMoids ASSOCIATED WITH OTHER DISEASES?

Yes, sometimes. They can be found in persons with Goldenhar syndrome, linear nevus sebaceous syndrome, and encephalocraniocutaneous lipomatosis, oculoectodermal syndrome, and Townes-Brocks Syndrome.

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