CASE NOTES

ECTOPIC CILIA*

BY

R. DALGLEISH

University Department of Ophthalmology, Royal Eye Hospital, Manchester

ECTOPIC cilia are very rare (Duke-Elder, 1964) and few cases have been recorded in the literature. It is the purpose of this paper to present two cases of this type and to discuss the relationship between the meibomian glands and congenital positional anomalies of the eyelash follicles.

Case 1, a male infant, was seen at the age of 7 months because the mother was concerned about a tuft of hairs on the outer side of the child's left upper eyelid, 4 mm. above the lash line (Fig. 1).

FIG. 1.—Ectopic cilia. Case 1.

The abnormally placed hairs were present at birth, and apart from the cosmetic aspect, caused no apparent inconvenience. There was no family history of any similar disorder and two female siblings were normal. General examination of the child did not reveal any other anomalies. It was decided to defer excision of the ectopic lashes until the patient was older.

Operation.—At the age of 13 months the child was admitted for surgery. Under general anaesthesia the tuft was seen to consist of 15 to 20 hairs. Apart from a slight dimpling of the tarsal plate corresponding with the situation of the ectopic lashes, the conjunctival surface of the lid appeared normal with fairly well-marked meibomian gland striations; the openings of the ducts of these glands appeared normal.

An elliptical incision was made around the tuft with the long axis parallel with the lid margin. The main core of the tuft extended through the depth of the lid into the anterior part of the tarsal plate, and it was necessary to excise a portion of that structure to effect complete removal of the hairs. The wound was sutured.

Result.—The final cosmetic result was excellent.

Histology (Dr. J. L. S. Smith).—The specimen comprised a full-thickness portion of the upper eyelid. The cutaneous surface measured 5 by 10 mm. and contained a centrally placed tuft of 15 to 20 lashes. Sections were cut parallel with the long axis of the strip (*i.e.* parallel with the lid margin) and perpendicular to the skin surface.

The ectopic eyelash follicles are closely set in a fibrous tissue core which extends through the thickness of the eyelid from the subcutaneous area to the anterior surface of the tarsal plate with complete interruption of the muscle arcades of the orbicularis oculi in this region.

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Examination of successive sections indicates that the lashes arise at varying levels, but mainly from the region of the anterior surface of the tarsal plate. The follicles have prominent attached sebaceous glands together with occasional sweat glands of the large apocrine type.

Well-developed meibomian glands are present in the adjoining tarsal plate.

Case 2, an adult male, was observed to have a tuft of hairs on the outer side of the left upper eyelid.

The hairs had been present from birth, and apart from the cosmetic aspect, caused no inconvenience. There was no family history of any similar disorder, and the patient's two children, a boy and a girl, and also his sister, were all normal.

The tuft was situated 8 mm. above the lash line and consisted of about 15 hairs which closely resembled eyelashes. Even with the eyelids closed, the hairs were partially hidden by the palpebral skin fold (Fig. 2*a*) and their site of origin was only visible when the fold was passively raised (Fig. 2*b*). On palpation, the tuft appeared to be anchored to the tarsal plate.

FIG. 2.—Ectopic cilia. Case 2. (*a*) with lid lowered; (*b*) with skin fold passively raised.

Once again, apart from a slight dimpling of the upper edge of the tarsal plate corresponding to the site of the ectopic lashes, the conjunctival surface of the lid appeared normal with fairly well-marked meibomian gland striations; the openings of the ducts of these glands appeared normal.

Discussion

In the very rare conditions of ectopic cilia and cilium inversum, eyelashes appear in abnormal situations because of a congenital positional anomaly of one or more lash follicles, and these entities should not be confused with the relatively common conditions of cilia incarnata and trichiasis, which may be regarded as disturbances in the direction of growth of the lashes.

Apart from some variation in the degree of vertical separation of the tuft of ectopic lashes from the lid margin, the two cases reported in this paper, and that of Scott (1953), seem to be very similar; this must be an indication of a degree of uniformity of one variety of this rare defect.

In addition to the fact that the abnormally-placed hairs closely resembled eyelashes, histological proof of their identity (in Case 1) is afforded by the presence of sweat glands of apocrine type attached to the follicles. The necessity to obtain proof of the identity of abnormally-placed hairs in this region before labelling them as eyelashes, is a point which appears to have been largely overlooked in previous writings on this subject.

From the numerous histological reports concerning cases of distichiasis, there would appear to be widespread agreement that, in this condition, the meibomian glands are completely or partially replaced by lash follicles (Duke-Elder, 1952; Fox, 1962). Bader

(1950) reported a case with apparently normal eyelashes, wherein some of the meibomian glands were replaced by lash follicles which appeared as dark spots under the tarsal conjunctiva. Tavolara (1959) recorded a case wherein, in association with distichiasis, two lashes originating in the tarsus grew into the conjunctival sac; histological observations seemed to indicate the possibility of a substitution of some meibomian glands by the abnormally-implanted lashes.

The manifest association between the abnormally-placed eyelash follicles and the meibomian glands in these cases, has led to the suggestion that ectopic cilia may be another illustration of this phenomenon (Duke-Elder, 1964). In the cases reported in this paper there is macroscopic evidence, and in one case additional microscopic evidence, of normal meibomian glands; this tends to negate the hypothesis of "meibomian gland substitution" for this particular variety of ectopic cilia.

In addition to the cases of Tavolara (1959) and Scott (1953), Wiegmann (1936) reported a case wherein an ectopic cilium grew from the middle of the conjunctival surface of the tarsus, in which it was deeply embedded.

Summary

Two cases of ectopic cilia are described. A specimen for histological examination was obtained from one case and the findings are presented. Three previously reported cases are briefly reviewed.

Attention is drawn to the differential diagnosis and identification of abnormally-placed hairs on the eyelids.

The relationship between the meibomian glands and congenital positional anomalies of the eyelash follicles is discussed. In the cases described, the meibomian glands were normal.

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