

## Ocular horn

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**SUMMARY** The case of a horn-like hyperplasia of the caruncle of the left eye in a 3-month-old child is reported. An atavistic origin of this growth as a vestigial upper incisor is suggested from the anatomical location of the horn.

Hyperplasia of the caruncle is a rare congenital abnormality rarely noted in the literature.<sup>1,2</sup> We report a case of hyperplasia of the caruncle in the form of a horn in a young child.

### Case report

A 3-month-old male child was brought to the hospital owing to an abnormal growth from the left eye. The growth had been noted a few days after birth and had been gradually enlarging.

On general physical examination the child did not have any other congenital abnormality of the face or

body. The right eye was normal on examination also. Examination of the left eye showed a horn-like growth 1.3 cm long arising from the caruncle (Fig. 1). The growth was conical, thicker at the base and tapering upwards. It was directed forwards and upwards. The upper two-thirds of the growth were dry and keratinised. The lower one-third was fleshy and moist. The medial canthus was somewhat displaced nasally. The upper and lower lids showed colobomas above and below the growth. Both upper and lower puncta were present. The eyeball was slightly displaced laterally. The rest of the ocular examination gave normal results. Testing the mobility of the growth under general anaesthesia showed it to be partially adherent to the eyeball. No abnormal conjunctival or episcleral blood vessels were seen feeding the growth.

The growth was shaved off from the episclera and examined histopathologically. It was found to consist largely of connective tissue, rich in elastic fibres, containing scanty adenoid tissue at one place only, and was covered with stratified columnar epithelium (Fig. 2). At one end of the section the epithelium was stratified cuboidal and keratinised. No germinal lymph follicles or muscle fibres were seen in the mass. No large blood vessels were seen.

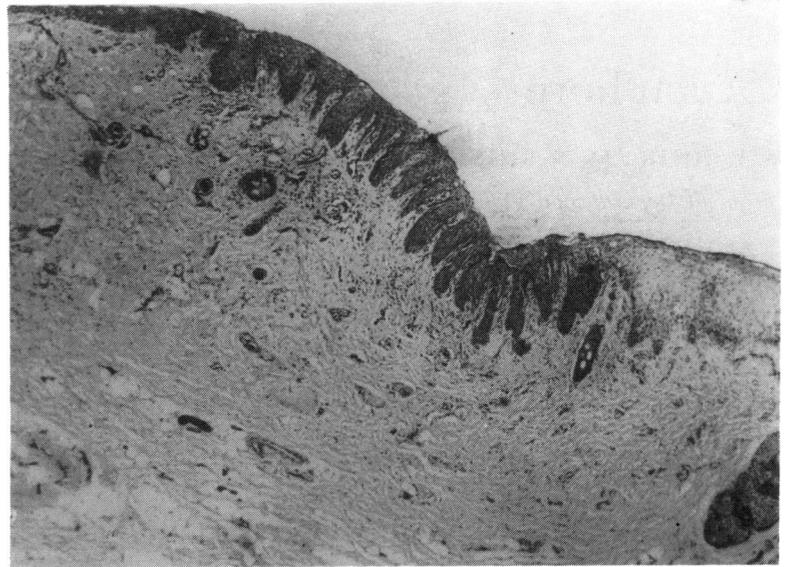
### Discussion

The clinical picture and histopathological examination pointed to a developmental overgrowth of the caruncle in the form of a horn. The caruncle develops independently at the end of the third month of gestation after the lids have fused. Classically it has been described as being formed by the cutting off of the inner part of the margin of the lower lid by the



Fig. 1 Horn-like growth arising from the caruncle of left eye.

Fig. 2 Histological section of the growth showing abundance of connective tissue covered by stratified columnar epithelium. On the right side of section the epithelium is cuboidal and keratinised. Haematoxylin and eosin,  $\times 48$ .



development of the inferior canaliculus and has been therefore said to be absent in animals with no lacrimal passages.<sup>3</sup> Papamiltiades,<sup>4</sup> however, found that it is developed at the end of the third month by cellular proliferation of the epithelium of the posterior surface of the medial part of the lower lid near its upper free border. Leplat *et al.*<sup>5</sup> agreed with such an independent origin. The presence of colobomas of the upper as well as lower lid in our case, with hyperplasia of the caruncle, does not support this view. It appears that in our case the cellular proliferation of the caruncle continued even after birth, giving rise to the abnormal growth.

The possibility of an atavistic origin of this horn-like growth cannot be ruled out. The anatomical location of the horn was similar to that of the tusks of elephants. Elephant tusks are greatly enlarged upper incisors (appendages of skin) which are situated on the medial side of the eyes and lateral to the trunk (a

greatly enlarged and more sensitive nose). These tusks are surrounded by a pouch of skin. On this view one would have to consider the caruncle to be a vestigial remnant of the upper incisor of lower animals.

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#### References

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- 2 Luthra CL, Dexanas MT, Green WR. Lesions of the caruncle: a clinicopathological study. *Surv Ophthalmol* 1978; 23: 183.
- 3 Collins ET. The physiology of weeping. *Br J Ophthalmol* 1932; 16: 1-20.
- 4 Papamiltiades. *CR Assoc Anat* 1947; 34: 418. Cited in Duke-Elder S, Cooke C.<sup>1</sup>
- 5 Leplat, Dejean, Hervouët, Leplat. *L'embryologie de l'oeil et sa teratologie*. Paris, 1958: 444. Cited in Duke-Elder S, Cooke C.<sup>1</sup>