CASE NOTES

CONJUNCTIVAL AMYLOIDOSIS*

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ON reviewing the literature of the last 10 years, it is found that tumour-forming amyloid infiltration of the lids is a rarity. Wahi, Wahi, and Mathur (1954) reported a case of primary conjunctival amyloidosis. Agarwal and Shrivastav (1958) described a case of amyloid tumour of the upper lid, and opined that it was probably secondary to trachoma. Mathur and Mathur (1959) described two more cases and suggested that the condition might not be so infrequent as implied by the published reports.

The pathogenicity of the condition is not fully understood. Ashton and Rey (1951) state that amyloidosis is only a particular variety of hyaline infiltration, and that the hyaline substance is formed locally through some unknown metabolic perversion. Dimmer (1903), Steiner (1904), Srinivasan (1949), and other recent writers have suggested that the condition is probably associated with trachoma. On the other hand, Duke-Elder (1938) considered that many cases cited as occurring with trachoma may be primary cases in which the condition is unrelated to the trachomatous infection. Ribnikova (1936) considered that the amyloidosis resulted from a chronic toxic irritation which produced a reticulo-endothelial blockade causing transformation of albumen into hyaline. Jona (1947) associated the condition with chronic allergic inflammation.

Case Report

A man aged 25 years, from a rural area, was first seen in the out-patients' department of the Irwin Hospital, Amravati, in March, 1959. He had a tumour of the left upper lid, which was horizontally oval, about 2×1 in. in size, which had appeared in the past year. The swelling was painless but caused the lid to droop, obstructing the vision. On eversion of the lid, the conjunctival surface was seen to be ulcerated along the length of the tumour, with rolled edges, giving the clinical appearance of a basal cell carcinoma. If it had proved to be carcinomatous, the tumour including the whole of the upper lid would have had to be excised, necessitating the reconstruction of the lid by plastic surgery, and the patient was therefore referred to a plastic surgeon, but in September, 1960, he returned to the Irwin Hospital without having taken any further steps to seek treatment.

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Examination.—The tumour then measured about $3 \times 1\frac{1}{2}$ in., and the eye was completely occluded (Fig. 1).

FIG. 1.—Appearance of patient in September, 1960.

From the outside the tumour felt hard with a granular surface, the skin being freely movable, except near the lid margin. When eversion of the lid was attempted the ulcerated area was seen to form an elongated cavity, and the conjunctiva was firmly adherent to the tumour from about 5 mm. above the limbus to the lid margin (Fig. 2). The cornea showed a well-marked trachomatous pannus and Herbert's pits.

FIG. 2.—Conjunctival surface of tumour, showing ulcerated cavity.

FIG. 3.—Everted upper lid of right eye, showing beginning of a similar growth.

The right upper lid also showed a slight thickening, and eversion revealed a shiny smooth greyish-pink surface over the tarsal plate (Fig. 3), and the patient said that the condition in the left eye had started in a similar manner.

The patient, who now complained of some pain and disturbed sleep at nights, was admitted to the Hospital.

Investigations.—These, including the blood Kahn test, were negative. Systemic examination revealed nothing abnormal.

A biopsy was done on September 9, using a diathermy knife, and a wedge-shaped piece of the tumour was sent to the pathology department of the Medical College, Nagpur. The report stated that there was an extensive amyloid deposit, verified by congo red stain, and that there were no signs of malignancy.

Operation.—It was therefore decided to excise the tumour leaving the lid intact. On October 17, the patient was operated upon under local anaesthesia. An incision was made all along the margin of the lid in the region of the grey line, and the anterior surface of the tumour was easily freed by dissection. An incision was made in the bulbar conjunctiva,

about 4 mm. above the limbus and almost concentric with it, and the whole tumour was shelled out with the adherent and ulcerated conjunctiva. The raw area was covered by a large mucous membrane graft, taken from the mouth, and the loose and redundant skin was left alone.

Result.—The appearance of the patient about 15 days after the operation is shown in Figs 4 and 5. It was decided to allow all possible shrinkage, and to trim the lid skin and redundant tissue after 2 months.

FIG. 4.—Appearance of patient 15 days after excision of tumour.

FIG. 5.—Conjunctival surface, showing mucous membrane graft.

Pathology.—The excised tumour (Fig. 6) was sent to the pathology department, Medical College, Nagpur, and the pathologist's report (Fig. 7) was as follows:

The tumour mass shows a heavy hyaline, homogeneous, acidophilic deposit of amyloid under the epithelium, which is stretched, atrophic, and ulcerated. Similar deposits are seen in the blood vessel walls. There is minimal cellular reaction, characterized by foreign body giant cells. Also seen are some round cells. The adnexal structures of the lid are obliterated, except at its periphery.

DIAGNOSIS: Amyloid tumour of the eyelid.

FIG. 6.—Excised tumour. Actual size 2" long.

FIG. 7.—Photomicrograph, showing extensive hyaline deposit with scattered giant cells and round cells.

Comment

The histological appearance and specific staining reaction for amyloid show that the tumour was due to localized amyloidosis of the eyelid. The clinical picture was so typical that the presence of trachoma was a certainty. This confirms the view of Oppel (1956) that trachoma is present in 60 to 70 per cent. of such cases. It is customary to speak of a generalized secondary and a localized primary type of amyloid disease. In view of the mounting evidence of the existence of old-standing inflammation, it is very likely that all cases of amyloidosis are secondary—some to a general disease process, and others to a local chronic inflammation such as trachoma.

Summary

The clinical and pathological findings in a case of amyloid tumour of the eyelid are described. The large size of the tumour and the ulcerated and eroded conjunctival surface simulating basal cell carcinoma were unusual features. The co-existence of trachoma confirms the views of many previous workers.

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REFERENCES

- AGARWAL, S., and SHRIVASTAV, J. B. (1958). *Brit. J. Ophthalm.*, **42**, 433.
 ASHTON, N., and REY, A. (1951). *Ibid.*, **35**, 125.
 DIMMER, F. (1903). *Z. Augenheilk.*, **9**, 474.
 DUKE-ELDER, S. (1938). "Text-book of Ophthalmology", vol. 2, p. 1750. Kimpton, London.
 JONA, S. (1947). *Rass. ital. Ottal.*, **16**, 270.
 MATHUR, S. P., and MATHUR, B. P. (1959). *Brit. J. Ophthalm.*, **43**, 765.
 OPPEL, O. (1956). *Klin. Mbl. Augenheilk.*, **128**, 145.
 RIBNIKOVA. (1936). *Sov. Vestn. Oftal.*, **9**, 911.
 SRINIVASAN, E. V. (1949). *Proc. All-India ophthal. Soc.*, **10**, 39.
 STEINER, L. (1904). *Zbl. prakt. Augenheilk.*, **28**, 33.
 WAHI, P. N., WAHI, P. N., and MATHUR, K. N. (1954). *J. All-India ophthal. Soc.*, **2**, 45.