AMYLOIDOSIS OF THE CONJUNCTIVA*

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AMYLOIDOSIS of the conjunctiva, though by no means unknown, is an uncommon disease. First described by Rokitansky in 1842, many subsequent reports have appeared in the literature. Two cases are presented here to record some interesting findings.

Case Reports

Case 1.—A male farmer, aged 36 years, presented with thickening of the right upper eyelid, which was everted with difficulty to reveal a pea-sized nodule in the lateral part of the tarsal conjunctiva, which was irregularly thickened up to the fornices. Clinical signs of accompanying trachoma were present in both eyes.

The nodule was excised and sent for microscopic examination. The histopathological picture showed amyloid infiltration of the conjunctiva (Fig. 1) with areas of calcification (Fig. 2). Investigations did not reveal any abnormality or the presence of systemic disease.

FIG. 1.—Case 1. Amyloid infiltration in the subconjunctival tissues. Haematoxylin and eosin. $\times 66$.

FIG. 2.—Case 1. Showing calcification (arrow). Haematoxylin and eosin. $\times 66$.

Case 2.—A female, 23 years of age, showed polypoidal growths in the conjunctiva and drooping of the right upper eyelid. Both the lids were thickened and had been so for two years (Fig. 3). With considerable difficulty the right upper eyelid could be everted. An irregular pink mass in

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the palpebral conjunctiva, extending to the fornices, was present. The tissue was friable and bled on rough handling. All investigations were negative.

The tissue was excised and an extensive mucous membrane graft from the buccal mucosa was provided to cover the tarsal area in both lids of the right eye. Histological examination of the excised tissue revealed amyloid infiltration of the conjunctiva (Fig. 4).

A follow-up revealed signs of recurrence after two months.

FIG. 3.—Case 2. Polypoid growth of the conjunctiva in the right eye.

FIG. 4.—Case 2. Amyloid infiltration in the subconjunctival tissue. Haematoxylin and eosin. $\times 66$.

Discussion

Ashton and Rey (1951) consider amyloid infiltration to be a specific form of hyaline infiltration, which includes a heterogeneous group of translucent, refractile, and structureless substances. Amyloid differs from hyaline in having specific staining properties and known chemical composition. It is now generally agreed that amyloid is a glycoprotein in which the carbohydrate ester, chondroitin sulphuric acid, has become attached to a globulin. It is probable that its composition varies, for the staining reactions are not constant. In both of our cases the diagnosis of amyloid was confirmed by special staining with cresyl violet and Congo red.

Amyloidosis is uncommon in India. The localized form occurring in the conjunctiva and the lids is rare. Bhende and Patel (1959), reporting on 12 cases of amyloidosis, did not find a single example of localized manifestation. Those who have reported this disease from India are Redi (1948), Srinivasan (1949), Wahi, Wahi, and Mathur (1954), Agarwal and Shrivastav (1958), Mathur and Mathur (1959), and Ishwarchandra and Sharma (1960).

Ptosis occurring with amyloid infiltration of the conjunctiva and the lids has been reported by Guerri and Wiesinger (1960) and Richlin and Kuwabara (1962). In our second case drooping of the upper lid was present because of the thickening and increased weight of the eyelid.

Hameed and Nath (1960) have reported bone formation with amyloidosis of the eyelids. In one of our cases (Case 1) calcification was seen in places (see Fig. 2).

Amyloidosis occurring in the conjunctiva and the eyelids may be primary or secondary. Though trachoma, spring catarrh, pinguecula, and pterygium have all been mentioned as having some causative bearing on the condition, it is difficult to draw a line between primary and secondary amyloidosis occurring in the lids, at least in the countries where trachoma is endemic. In both of our cases, though trachoma was present equally in the two eyes, the amyloid infiltration affected only one eye. The occurrence of amyloidosis of the lids is extremely rare, compared with the incidence of trachoma in India, which very often lasts a lifetime without leading to amyloid infiltration in the tissues. Also, although trachoma was present in both of our cases no remarkable cellular reaction was seen in the tissues microscopically.

Summary

Two cases of amyloid disease of the conjunctiva are described. The following points are worthy of note: (a) The disease is extremely rare. (b) The conjunctival amyloidosis may occur unilaterally in the presence of bilateral trachoma. (c) Calcification can occur therein. (d) Ptosis resulting therefrom appears to be mechanical in nature.

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