

CASE NOTES

MYXOMA OF THE CONJUNCTIVA*

BY

O. O. FFOOKS†

Royal Infirmary, Sheffield

MYXOMATA are rare connective tissue tumours which may occur in various parts of the body. They arise chiefly in loose subcutaneous and aponeurotic tissue in bone, genito-urinary tract, skin, and heart. Less frequently affected are the intestines, nares and sinuses, muscles, joints, pharynx, breast, and orbit (Stout, 1948).

Myxoma of the conjunctiva is extremely rare and the following case report is, therefore, of interest.

Case Report

A man aged 72 years had been under observation since June 23, 1953, for chronic glaucoma. On July 26, 1953, a right corneo-scleral trephine was performed after turning down a limbus-based conjunctival flap. The post-operative course was uneventful. A normal-sized filtering conjunctival bleb was formed and the intra-ocular pressure was maintained below 25 mm. Hg (Schiötz).

He was seen periodically, and on December 14, 1960, it was noticed that the bleb had apparently increased in size over a period of 6 months.

Examination.—Next to and apparently adjoining the filtration scar was a smooth, soft, circumscribed tumour, lying beneath the conjunctiva and slightly pedunculated. It was opaque white in colour and was not vascularized, and measured approximately 4 × 4 × 8 mm. The eye itself was quiet.

Operation.—The tumour was excised under local anaesthesia with a small amount of overlying conjunctiva. It was found to lie adjacent to, but not in continuity with, the filtration bleb of the trephine operation. It was easy to separate from the subconjunctival connective tissue. The conjunctiva was resutured and healing was uneventful. The intra-ocular pressure has remained below 25 mm. Hg (Schiötz).

Histological Report

MACROSCOPIC: "Two small fragments of soft whitish tissue."

MICROSCOPIC (Figs 1 and 2, opposite): "The fragments of tissue show a small subconjunctival nodule composed of loose connective tissue with stellate cells, some of which have a vacuolated cytoplasm. There is no nuclear pleomorphism or mitotic activity. Alcian blue staining for mucin is positive in the stroma. The overlying conjunctiva is thin but intact, and removal of the nodule appears complete. The appearances are consistent with a small subconjunctival myxoma. No inflammatory or granulation tissue is seen in the sections examined."

* Received for publication May 1, 1961.

† Present address: St. James's Hospital, Leeds.

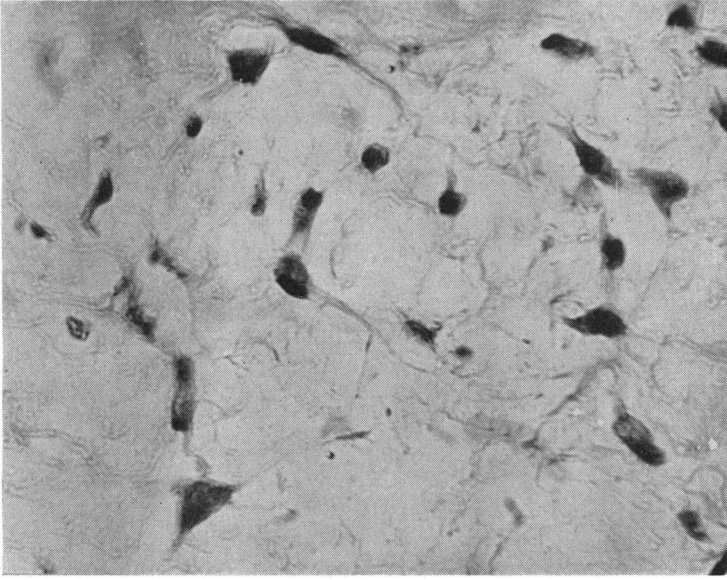


FIG. 1.—Photomicrograph of conjunctival myxoma, showing loose connective tissue with stellate cells. Haematoxylin and eosin. $\times 110$.

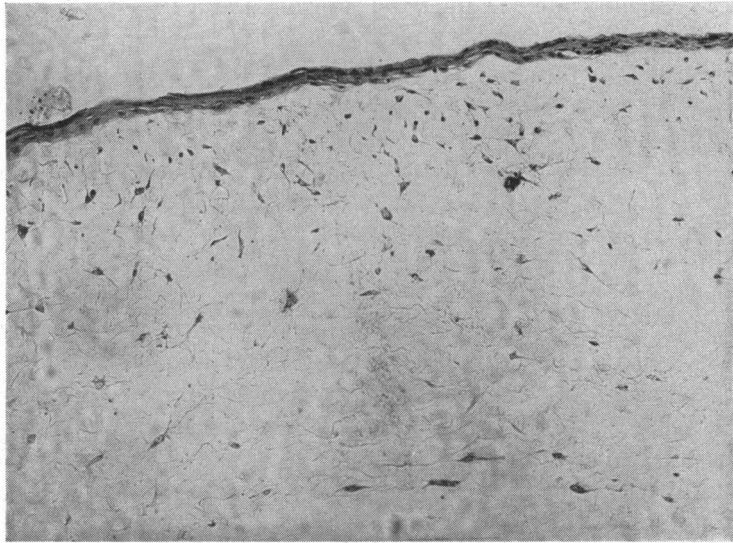


FIG. 2.—Photomicrograph, showing enlarged view of myxoma with characteristic stellate cells. Haematoxylin and eosin. $\times 540$.

Comment

Myxomata present themselves clinically as fairly well-circumscribed, rather soft tumours. Histologically they contain fibroblasts that possess the ability to produce mucin in a manner similar to that of the embryonal fibroblasts of the umbilical cord. The number of these cells is usually small, and they are stellate in form, with multipolar processes. The very delicate reticulin fibres course through the loose mucoid stroma in various directions (Stout,

1948). Occasionally denser areas are present because of a thickening of the delicate connective tissue fibres and a lessening of the mucoid material, and in these areas some of the cells may become spindle-shaped (Stout, 1948).

Myxomata occur very rarely within the orbit. Stout (1948), in a series of 144 cases which included those collected from the literature, reported four occurring within the orbit and eyelids.

Fuchs (1914) reported a myxoma of the orbit in a 40-year-old woman who had had increasing proptosis for 7 years. A large encapsulated true myxoma was removed at operation.

Klionsky (1925) described what appeared to be a large myxoma of the frontal sinus that had extended into the orbit, but there was no histological examination in this case.

Lamb (1928) described a myxoma of the orbit in a girl aged 16 who had had increasing proptosis for 3 years. At operation it was found that the tumour appeared to arise from the superior orbital fissure.

Bistis (1931) described a myxoma occurring in the roof of the orbit in a man aged 29, who had had symptoms for 3 years. It was easily removed at operation.

Gifford (1931) described a multiple recurrent myxoma in a woman aged 25, which occurred under the roof of the orbit.

Town (1945) described a myxoma of the lower eyelid in a woman aged 39, which presented as a small lump near the inferior punctum. This tumour appeared to originate from the intermuscular connective tissue of the orbicularis.

Conjunctival myxoma are extremely rare. Magalif (1913) demonstrated a histological specimen at a meeting of the St. Petersburg Ophthalmological Society, but there is no indication whether or not her specimen was a pure myxoma, nor are any details given.

Maucione (1914), who described a pure myxoma of the conjunctiva, was unable to find any cases of pure myxoma of the conjunctiva in the literature. His own case was that of a man aged 59 who had had a small "pimple" near the limbus on the inner side of his right eye for the previous 6 years. It had increased in size during the previous 6 months. Examination showed a small reddish tumour lying subconjunctivally, which measured $10 \times 8 \times 6$ mm., and was easily removed. Histologically the mass consisted of sparse round and elongated cells, some of which had fine processes lying in a loose connective tissue stroma, in which there were many fine fibrils running in many directions. There were also many fine capillaries, especially in the centre of the tumour. There was no capsule.

This description and the illustration appear consistent with that of a myxoma, although the large number of blood vessels in the specimen suggests that this might have been derived from granulation tissue. It is well known that granulation tissue may occasionally present a myxomatous appearance (Muir, 1958).

Bakker (1948) described what he called a myxo-haemangioma simplex in a woman aged 35, which had arisen at the inner canthus near the plica semi-lunaris. It had the appearance of a capillary haemangioma with much myxomatous degeneration. This tumour clearly appears to have been a capillary haemangioma in which the myxomatous changes were purely secondary.

It seems then that there is in fact only one authenticated case of conjunctival myxoma on record—that described by Maucione (1914).

The tumour in the present case has the clinical and microscopical appearances of a true myxoma, but its origin at a site so close to the trephine bleb might arouse doubts as to its true nature. Although it seemed isolated from the trephine bleb, it is unlikely, in view of the extreme rarity of conjunctival myxoma and its close proximity to the bleb, that this tumour had arisen *de novo*.

The trephine operation was performed 6 years before the tumour appeared and the eye showed no signs of recent infection or inflammatory reaction. The tumour sections are devoid of blood vessels and there is no granulation tissue next to the tumour. It does not seem possible that this tumour is altered granulation tissue, nor that mucopolysaccharides have derived from any adjacent granulation tissue.

Whether this is a true myxoma or a pseudo-myxoma of the conjunctiva, its presence must be admitted and as such considered as a rare complication of trephine operations. It is well known that filtration blebs do occasionally become excessive with the passage of time, and it is possible that, in these cases also, myxomatous degeneration is taking place in the filtration bleb itself.

Summary

A small tumour, which has the appearance of a myxoma of the conjunctiva is described. It is considered to have occurred as a complication of a trephine operation 6 years previously. The literature is reviewed.

I wish to thank Dr. J. R. Tighe, M.R.C.P., for his help and for the histological report, also Mr. A. B. Nutt, M.Sc., F.R.C.S., for permission to publish this case.

REFERENCES

- BAKKER, A. (1948). *Brit. J. Ophthalm.*, **32**, 485.
 BISTIS, J. (1931). *Arch. Ophthalm.*, **48**, 440.
 FUCHS, E. (1914). *Klin. Mbl. Augenheilk.*, **53**, 244.
 GIFFORD, S. R. (1931). *Arch. Ophthalm. (Chicago)*, **5**, 445.
 KLIONSKY, G. (1925). *Lancet*, **1**, 126.
 LAMB, H. D. (1928). *Arch. Ophthalm. (N.Y.)*, **57**, 425.
 MAUCIONE, L. (1914). *Arch. Ophthalm.*, **21**, 300.
 MAGALIF (1913). *Klin. Mbl. Augenheilk.*, **51**, 844.
 MUIR, R. (1958). "Text-book of Pathology", 7th ed., rev. D. F. Cappell, p. 168. Arnold, London.
 STOUT, A. P. (1948). *Ann. Surg.*, **127**, 706.
 TOWN, A. E. (1945). *Amer. J. Ophthalm.*, **28**, 68.