AN UNUSUAL MOOREN'S ULCER*

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MOOREN'S ulcer (chronic serpiginous ulcer) of the cornea is described as a superficial corneal ulcer usually occurring in the elderly and eventually spreading over the whole corneal surface. Associated features are pain and lacrimation; iritis may occur and rarely a hypopyon (Duke-Elder, 1959).

Initially one or more grey peripheral infiltrates occur; these ulcerate and coalesce. Undermining of the corneal epithelium and superficial lamellae is responsible for the characteristic over-hanging whitish edge. Progress occurs circumferentially and towards the centre. There is minimal inflammatory reaction with epithelialization of the undermined edge and crater (Hogan and Zimmerman, 1962) followed by vascularization of the ulcer base. Perforation never occurs (Duke-Elder, 1959). Progression with intermissions is the rule until the whole cornea is a thin nebula with corresponding diminution of vision. In one quarter of cases both corneae are involved, but not always simultaneously (Duke-Elder, 1959). The aetiology is unknown.

The following case report records an unusual, and initially perplexing presentation, and the subsequent management.

Case Report

A man aged 60 years first attended the out-patients department at the Manchester Royal Eye Hospital on January 20, 1962, complaining of a sore left eye for 2 weeks. He volunteered the information that a small swelling on the nasal side of the limbus had been noticed by the works' ambulance man one week before.

Examination.—There was a small staining area of the corneal periphery on the nasal side adjacent to a thickening of the conjunctiva. The visual acuity was 6/12 in each eye.

Treatment.—Atropine and chloramphenicol drops were prescribed and the patient was observed on several occasions in the out-patients department. No evidence of uveitis or increased tension was recorded, although the limbal tumour gradually increased in size. At no time was severe pain complained of, the main symptoms being lacrimation, irritability, and slight stickiness of the left eye. The patient considered his general health excellent.

Progress.—On March 3, 1962, the swelling was described as a soft, fleshy, vascularized

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sessile nodule about 2 mm. in diameter, irregularly circular, and situated over the nasal limbus of the left eye. The surrounding cornea was infiltrated (Fig. 1).

The visual acuity was still 6/12 in each eye. The patient was admitted to hospital with a provisional diagnosis of Bowen’s disease of the cornea.

Investigations.—A full blood count, haemoglobin estimation (E.S.R.), x ray of chest, lumbar vertebrae, and sacro-iliac joints, and Wassermann and Price’s precipitation reactions. The only findings of possible significance were a haemoglobin of 12·5 g. and osteo-porosis of the lumbar vertebrae.

Operation.—On March 16, 1962, after the tumour had been removed with a trephine, a left lamellar graft involving the cornea and sclera was performed under local anaesthesia (Fig. 2).

Post-operative Treatment.—Gutt. atropine 1 per cent. and Neobacrin ointment daily was prescribed. Sulphadimidine 2 g. was given followed by 1 g. 6-hrly for 5 days. At the end of one week Neocortef ointment was substituted for the Neobacrin.

The sutures were removed on April 9 and the patient was discharged on April 11. Gutt. atropine was continued for a further 12 weeks and gutt. Neocortef for 16 weeks.

A histological report on the biopsy stated that the tissue was a granuloma.

Progress.—On follow-up visits to the out-patients department the graft, including the scleral segment, was reported to remain transparent. By July 28, however, the limbal swelling had reappeared (Fig. 3) and the patient was re-admitted for a further opinion.

It was unanimously agreed that the clinical picture suggested an epithelioma. A further urgent biopsy was carried out on September 17, the nodule being excised in toto.

Histological Report (Fig. 4, opposite).—“Granuloma telangiectaticum: Fragment of tissue, 3 mm. long. The specimen is composed entirely of vascular granulation tissue. Polymorphs
AN UNUSUAL MOOREN'S ULCER

are numerous on the surface where there is some fibrinous deposition. Both centrally and on the surface there is now a considerable deposition of collagenous material. This granulomatous reaction now shows evidence of regression”.

The lesion continued to progress and spread over the cornea, and now exhibited the classical features of a Mooren's ulcer (Fig. 5). Finally a conjunctival flap was mobilized on August 15 to cover the corneal ulcer and post-operative treatment was instituted with Neobacrin ointment.

Fig. 4.—Vascular granulation tissue, with limited inflammatory cell infiltration and covering fibrin layer. × 150.

Fig. 5.—Classical Mooren's ulcer on left nasal limbus (August, 1962).

Discussion

An unusual feature illustrated by this case report is the initial prolific and circumscribed granulation tissue reaction of the peri-limbal conjunctiva to a marginal corneal ulcer. The usual flattened elongated pseudo-pterygium did not occur. The differential diagnosis of this case must include Bowen's disease (interepithelium epithelioma, carcinoma in situ). This dermatosis may also occur at the limbus as a dull red nodule with a flat greyish corneal infiltration. Another type of dyskeratosis occurs as a plaque at the limbus and histologically resembles the erythroplasia of Queyrat. Squamous epithelium of the limbus is a flat or papilliform vascular neoplasm
which may spread into the cornea but does not usually invade the substantia propria. If invasion occurs it is usually restricted to the superficial lamellae. Invasion of the sclera and globe is rare (Hogan and Zimmerman, 1962). The leucoplakic type of dyskeratosis (Ash and Wilder, 1942) is a potential pre-cancerous condition of the limbus occurring as a slow-growing, raised, whitish plaque of thickened epithelium. Fibromata both hard and soft may occur, the latter bleeding easily on the slightest trauma. Papillomata, some of them showing a neoplastic tendency which may be confirmed by histology, are usually confined to the limbus in old people.

The treatment of chronic serpiginous ulcer is always a difficult and anxious problem for the ophthalmic surgeon. Application of absolute alcohol to the ulcer, zinc ionization, and subsequent conjunctival flap and beta rays have all been tried with occasional but random success (Duke-Elder, 1959). The above therapeutic measures and peritomy have been found ineffective by others (Trevor-Roper, 1962). This is probably explained by the intermissions characteristic of the disease. The fate of attempted corneal grafts is well illustrated by this case.

**Summary**

A Mooren’s ulcer presenting as a granuloma telangiectaticum and its subsequent management is described. The differential diagnosis and treatment are discussed.

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AN UNUSUAL MOOREN'S ULCER

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