

SYMPATHETIC OPHTHALMITIS*

BY

P. A. S. EVANS

Salisbury, Southern Rhodesia

THIS condition is rare in Africans in spite of the large number of perforating ocular injuries; the case described here is the first recorded in Southern Rhodesia, and only one has been seen in Nyasaland in 5 years (Peacock, 1962). Very large numbers of ocular perforations are seen in ophthalmic practice here and it is also only too common to find corneal scars from old injuries. In spite of this the danger to the uninjured eye from sympathetic ophthalmitis seems remote. It is not possible to give figures for the number of ocular perforations occurring as many patients do not seek medical advice and those in the country districts are often dealt with by the District Government Medical Officer. This is exemplified in the case described, in which the patient was referred to the Central Hospital only when the uninjured eye had become involved. As far as hospital admissions are concerned, injuries, both perforating and non-perforating, form the largest group; during 1962 a total of 58 patients with traumatic ocular perforations were admitted under my care.

Mann (1961) mentioned that Dr. Rankine, working in Nigeria, saw only one case in 2,051 patients. During a survey of blindness in Northern Rhodesia, Phillips (1961) examined 2,701 blind persons and found only one case of blindness due to sympathetic ophthalmitis. On the other hand, Holst (1950) examined 3,181 blind persons in Norway and found that 150 were blind from sympathetic ophthalmitis. Mann also noted an "absence of sympathetic ophthalmitis in the presence of untreated perforating injuries is seen among Australian Aborigines" (Mann, 1961), and that "this disease seems very rare in all racial groups south of the equator" (Mann, 1962). Other ophthalmologists have also found that the condition is rare in warm climates. Topham (1962) had not seen a single case in 5 years in New Guinea. It is also very rare in Israel as Michaelson (1962) last saw a case in Israel in 1951. Chandra (1962) described it as uncommon in all tropical and sub-tropical countries, basing his opinion on his experience in India.

Not all workers, however, are convinced that this condition is rare in Africa. For example, Rodger (1959a) stated that "sympathetic ophthalmitis, which in the late stage is difficult to diagnose in an African, would appear to be a more common cause of blindness than it is normally given credit for", and that "total blindness as a result of trauma was found only when injury to one eye was associated with a plastic anterior uveitis in the opposite eye, almost certainly a sympathetic ophthalmitis" (Rodger, 1959b). The true incidence is difficult to ascertain for, as Woods (1961) stated, "The incidence

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of sympathetic ophthalmia following uveal traumatism in the exciting eye is variously given as from 0.5 to 5.0 per cent. The lower estimates are probably correct”.

Case Report

A female African aged 35 years, indigenous to Rhodesia, was admitted to Ndanga District Hospital on May 28, 1962, having been hit on the right eye by her husband with his fist on May 19. The District Medical Officer noted at that time that there was a laceration through the sclera, with serious loss of contents and prolapse of uveal tissue. Enucleation was refused so the wound was trimmed and sutured and covered with a conjunctival flap. Post-operatively she was given Ledermycin by mouth and Achromycin ointment with pad and bandage. She went home shortly after and about the end of June developed pain in the left eye, but did not return to Ndanga Hospital until July 13, when she was referred to Harari Central Hospital. On admission she gave the history as outlined above and also stated that she had never had any previous eye disease except “pus in her eyes” as a child.

Examination.—The right eye was soft with a healed irregular wound of the sclera about 10 mm. long running downwards and medially approximately 1–2 mm. from the limbus on the nasal side. Pigment was seen in this laceration and the eye was quite blind. It showed ciliary injection and the anterior chamber was almost obliterated.

The left eye also had no perception of light and showed ciliary injection and a gross anterior uveitis with an irregular fixed pupil and dense posterior synechiae. There was marked flare and cells and large “mutton fat” keratic precipitates. There was no red reflex and the ocular tension was normal.

She was fully examined medically and no other disease was found.

Laboratory Investigations: Blood Wassermann reaction, negative; Erythrocyte sedimentation rate, 44 mm/hr (Westergren); Haemoglobin, 83 per cent. 12.2 g. per cent.; White blood cells, 17,250 per c. mm.; Neutrophils, 60 per cent.; Lymphocytes, 32 per cent.; Monocytes, 8 per cent.

Treatment.—She was given large doses of prednisolone by mouth and also subconjunctival prednisolone and mydracaine. On July 23 the ocular tension started to rise and she was treated with Diamox, but this did not control the raised pressure and a paracentesis was therefore performed. The tension remained low for 2 weeks after this and then returned to normal.

Progress.—While she was in Harari Hospital a cyclitic membrane formed on the lens, and capillaries arising in the iris grew over it. The large white “mutton fat” keratic precipitates eventually almost completely covered the lower half of the corneal endothelium and a white mass approximately 0.5 mm. in diameter protruded from the iris near the pupil margin at 3 o'clock. The ocular tension again started to rise above normal, but further treatment was refused and she returned to her home on September 26, completely blind.

Discussion

Much has been written and discussed regarding the aetiology of sympathetic ophthalmitis, and a great deal could be learned by studying the geographical distribution of this condition. Ocular perforating injuries are common in African practice yet sympathetic ophthalmitis is very uncommon. It therefore seems pertinent to wonder why and to advance hypotheses.

Various theories have been put forward, including the ciliary nerve theory, infection, tuberculotoxin, virus or rickettsiae, and allergy. Of these, the

first three have been discarded, leaving the field to the protagonists of the last two.

Ocular allergy is common and gross in the African in this part of the continent. Vernal catarrh, for example, is almost invariably limbal in type and is really severe and incapacitating. Phlyctenular keratoconjunctivitis is also relatively common in African children, and other forms of uveitis, besides sympathetic ophthalmitis, are frequently seen. It therefore seems legitimate to suggest that, as all forms of ocular allergy are common, sympathetic ophthalmitis would be seen more frequently if it were an allergic process.

It is therefore suggested that the rarity of this condition in warm countries—*e.g.* Africa and parts of Australia—supports a virus aetiology. This virus probably needs both a perforating injury and a cold climate to potentiate it and cause it to become pathogenic. In this regard it is interesting that it was stated by Duke-Elder (1940), "Curiously there is a seasonal incidence, the majority of cases occurring in the winter months".

It seems hard to believe that the incidence of allergic conditions would be modified so greatly by climate and it is therefore suggested that the geographical variation in incidence favours a virus aetiology.

Summary

A case of sympathetic ophthalmitis leading to blindness in an African woman is described. This condition is rare although ocular perforations are common in Central Africa. This rarity is thought to favour a virus aetiology.

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