We cannot at present do more than suggest possibilities as to the cause of this epidemic. Unfortunately we have not been able to refer to the literature on this subject. We have, we believe, excluded the common causes of acute diseases of the gastro-intestinal tract—namely, typhoid, the paratyphoids, the dysenteries, and the *Salmonella* group—and food poisoning due to staphylococci and streptococci has also been excluded. The chemical causes have not yet been excluded, and this is to be part of our further investigations.

It is possible that this outbreak is of virus origin and similar to the so-called gastric influenza, or the gastro-enteritic type of distemper in dogs or swine fever in pigs. Bloods from different cases presenting the symptoms are being examined at the Wellcome Institute, London, for the possibility of virus infection, but no results are yet available. It is hoped that this preliminary paper will stimulate investigations at other stations which may have similar outbreaks, and at a later date we hope to publish further observations and to have available the results of the work at the Wellcome Institute, together with the results of blood counts and the examination of faeces and water supply for any possible chemical cause.

We wish to thank Dr. D. T. Robinson, who has worked in the closest co-operation with us in these investigations and who has been, entirely responsible for all the bacteriological work; also Major-General W. Brooke Purdon and Colonel D. Ahern for permission to publish this preliminary note. We wish especially to stress how close and cordial are the relations between the emergency public health laboratory and the R.A.M.C. in this area.

THE REPAIR OF LACERATED EYES

BY

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This article may be looked upon as a plea for the saving of a damaged eyeball. I hope it will appeal to all surgeons, whether ophthalmic or general.

Many of those who are injured as the result of air raids are found to be suffering from lacerated injuries, as in the recent case of a man aged 50 who had both eyes slashed across with flying glass. The left eye was literally in ribbons and had to be removed, but the right eye showed a horizontal cut across the cornea from limbus to limbus. The edges of the wound were fairly well opposed. This condition is often found among the civilian wounded, and the requisite operation should present no difficulties to an ophthalmic surgeon. The general surgeon, however, is often tempted to remove such an eye. Instead the following procedure—known as Kuntze's operation—is recommended.

Operative Procedure

The skin of the eyelids, forehead, nose, and cheeks is carefully cleansed, preferably with merthiolate solution No. 45 (P.D.), 1 in 4,000. The lids are gently held apart by an assistant and lifted from off the eyeball to avoid all pressure and the consequent squeezing out of the contents of the eyeball. A few drops of 5% cocaine and some of the same merthiolate solution are used to clean the conjunctival sac, but washing out should be avoided. On the side nearest to the wound the conjunctiva is picked up and cut with scissors, thus forming a ribbon (Fig. 1) which can be gently slipped down over the cornea and laid over the length of the corneal wound. At each side the ribbon is held in place by a suture (Fig. 2). Soft ophthalmic boric ointment with 1% atropine is laid inside the eyelids, and both eyes are bandaged

to avoid movement. A little ointment may be slipped into each conjunctival sac daily. In four to five days the sutures will cut out, and often the ribbon will retract, showing a

FIG. 1.

FIG. 2.

healed cornea. If the conjunctiva adheres to the wound this can be gently dissected off a few weeks later. The action of the eyelids helps in the separation of the conjunctiva from the cornea.

In the case mentioned above it was discovered, when the cornea was healed, that the lens capsule had been lacerated and lens matter filled the anterior chamber. This will be removed by a curette evacuation later on.

Sometimes a cornea will not heal, owing either to malposition of the edges of the wound or to the fact that the wound edges are not sharply linear. Here the procedure is the same at first as that already mentioned. Pressure of the eyelids on the damaged eyeball must not be allowed. A narrow strip of conjunctiva is again dissected more or less parallel with the wound. Using Traquair's conjunctival suture forceps—an instrument with a small horseshoe at the end of each prong (Fig. 3)—the edge of the corneal wound can be picked up and a fine needle passed from within outwards

FIG. 3.—Traquair's conjunctival suture forceps.

through the thickness of the cornea between the little arms of the horseshoe and then through the overlying conjunctival strip. The other edge is now picked up in the same way and another needle is passed through the cornea, then through the conjunctival slip, and the suture is tied. (The suture, a 12-inch piece of silk threaded at each end with a fine cutting needle, is made by Messrs. Merson of Edinburgh and is used for corneo-scleral suturing during cataract operations. It bears the author's name. If not available any fine silk—say No. 00 thickness with a No. 5 or 6 squint needle at each end—will do.) The overlying vascular slip helps the avascular cornea to repair, and thus the eye can be saved. It should be mentioned that protruding iris should be gently caught up and cut away. To avoid pressure on the eyeball Arruga's speculum should

FIG. 4.

be used. This is better than using Desmarre's separate lid retractors.

The final stage of the operation, depicted by Fig. 4, is the same as Fig. 2, but instead of a suture at each end of the slip the suture will be in the middle of the slip but not quite in the centre of the pupillary area.

The largest wound of the eye ever repaired by me was a transverse cut across the cornea and as far again through the sclera. Another case was that of a machinist who was cutting tin. A strip flew out of the machine and cut the

woman's eye from the inner canthus to the outer. She had the wit not to squeeze, but just held her eyes shut. The wound, treated as above, healed, and it was then found the lens had not been touched. In spite of some lost iris she retained good vision and was able to start work again.

Clinical Memoranda

Albinism: Observations in Two Native Seychelles Families

Among many peculiarities in Nature's constructions is albinism. This subject is of some special interest, as it is seen not only in mankind but also in animals. The following observations were made on two native families in Mahé, Seychelles Archipelago, situated in the middle of the wide expanse of the Indian Ocean.

Family A.—Of this family of eight, six members are pure albinos. The father is an albino, the mother a pure negress. The first five children are albinos, the sixth a pure negress. The father is the son of a pure Frenchman from Réunion and a pure negress (a Malgache) from Madagascar. Whereas

FIG. 1.—Showing genealogy of Family A. The white circles represent Europeans; the black circles, negroes and negresses; and the black circles with white centres, albinos.

FIG. 2.—Showing genealogy of Family B. The black circles represent negroes and negresses; and the black circle with white centre, an albino.

he was born an albino, his only brother is purely negroid; so far as can be ascertained this brother has no children. His grandparents were pure French on his father's side but pure Malgache of Madagascar on his mother's side. His wife, a negress, is a descendant of a pure negroid stock from Africa. She and her youngest baby appear to be normal in all characteristics.

Family B.—This is a family of nine, being father, mother, and seven children, of whom the third is a pure albino. The entire ancestry consists of pure African negroid stocks, without any albino whatsoever. In this albino child all the typical characteristics seen are similar to those observed in Family A. The parents and other children are normally negroid in all characteristics.

These albinos show certain marked features. There is complete absence of pigment in the skin, the hair, and the eyes. The skin is extremely white, unrelieved by the slightest tint

of red from exposure to strong sunlight. The hair is curly, of the negroid type but rather fine, and this is uniformly seen all over the body in all the above cases. The pupil shows a red tint, and the iris surrounding it has a pale rosy colour. Bilateral nystagmus is present in all cases, as also is photophobia. They cannot tolerate strong light, and when asked to face sunlight they close the eyes at once. Myopia, too, is pronounced in these cases, and large letters are discerned to any degree of clarity only at about four to five inches distant. When they are out walking the face and eyes are turned downwards.

Albinism is a congenital anomaly consisting of a remarkable peculiarity in the physical constitution of certain individuals. The Portuguese, who recorded their findings among the negroes of West Africa, called the persons so affected "albinos." The pigment defect has been observed both in the white and in the black races of mankind. It is most common and most pronounced in the negro and Indian races. It has also been encountered in the lower animals, among which are found the white monkey, the albino crow, robin, and opossum, the white hare, and the so-called white elephant, which is regarded with veneration by some Eastern nations.

In these native Seychelles families no mental defect is observed except a slow mental response. The powers of procreation appear to be unaffected. In Family A five albino

FIG. 3.—Family A.

FIG. 4.—Family B.

children are born from an albino father, a condition considered to be of great rarity. In Family B the birth of an albino child to negroid parents seems to be more compatible with the usual observations.

Consanguinity and heredity have been noted among the alleged causes of albinism, but its aetiology is obscure. Can it be due to a fault in the endocrine system, a break or absence of a hormone in the chain which regulates the colouring matter in the skin, hair, and eyes? Is it some defect in the suprarenal gland or in the posterior pituitary gland? In fact, what is it?

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