CASE NOTES

ELECTRICAL CATARACT PRODUCED BY A 240-VOLT CURRENT*

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Case Report

A seaman aged 22 years fell whilst on duty on board a submarine on September 14, 1956, and struck his head on an electrical contact carrying 230–240 volts D.C. The circuit contained a 5-amp. fuse which was found to be intact after the accident. He sustained a superficial burn of the right eyebrow which healed satisfactorily. No injury to the eyes was noted and vision after the accident was stated to be normal.

About October 25, 1956, whilst on sick leave, he first noticed blurring of vision in the right eye. On his return from leave on November 7, 1956, he was found to have a cataract in the right eye and was transferred to the Royal Naval Hospital, Haslar, for further treatment.

Examination.—(November 9, 1956.) The left eye was normal with visual acuity 6/6. There was a healed burn just above the inner third of the right eyebrow, and visual acuity in the right eye was hand movements only. The right eye was white, and the right lens showed an immature cataract of very distinctive appearance. Immediately beneath the anterior lens capsule were numerous very small, dense, discrete opacities of various shapes. There were also several diffuse opacities in the deeper parts of the lens. Both types of opacity can be seen in the Figure (opposite).

Treatment.—On January 9, 1957, a curette evacuation of the right lens was performed, as much as possible of the anterior lens capsule being removed with capsule forceps. Recovery was satisfactory and fittings for a contact lens were started as soon as possible.

Follow-up.—The patient now (February 11, 1957) has a tolerance of 6 hours daily. Visual acuity in the right eye is 6/12 with the contact lens, and he has satisfactory binocular vision.

Discussion

This case of electrical cataract is regarded as of interest in that it was caused by such a low voltage, 230–240, which is in the range of normal domestic electric supplies. The history of a 6 weeks' latent period before the onset of symptoms and the appearance of the cataract are typical of previous descriptions of cataracts caused by electricity.

I have been unable to trace any reference to a cataract caused by a current

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FIGURE.—Lens opacities seen in slit-lamp beam.

of such low voltage. Duke-Elder (1954), quoting numerous sources, mentions a range of 500–80,000 volts.

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REFERENCE

DUKE-ELDER, S. (1954). "Text-book of Ophthalmology", vol. 6, p. 6436. Kimpton, London.