

MERCURIALENTIS*

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Case Report

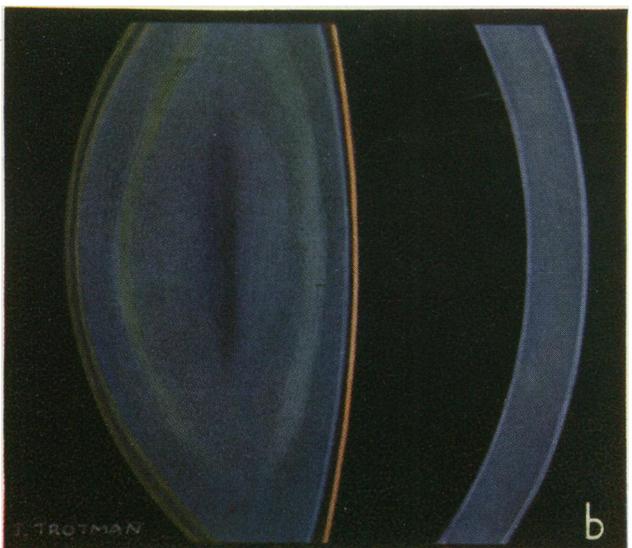
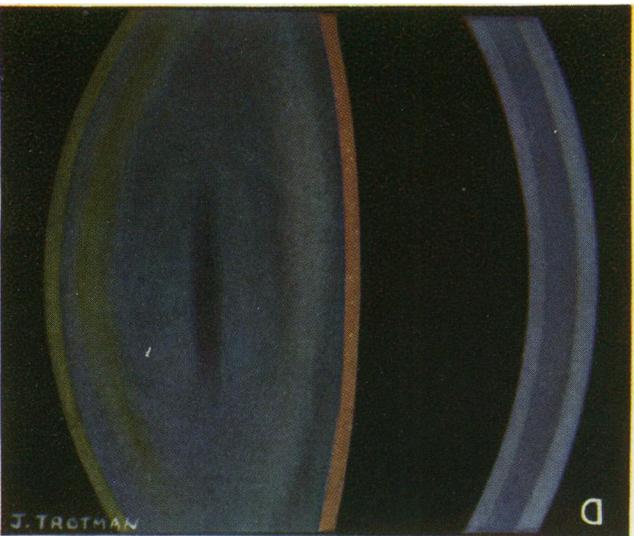
A MAN aged 58 had been employed for 35 years (1909–1939 and 1942–1947) as a thermometer maker. In 1935 the bulb of a long pipe thermometer containing 2 oz. mercury burst in the palm of his right hand and some of the mercury was deposited under the skin. Most of the mercury was removed at the time of the injury, but during the following week he developed ataxia and nystagmus and was thought to have acute labyrinthitis. He attended hospital regularly for 2 years, during which time his hand never healed completely. Finally he was admitted to hospital in 1937 when a grey scarred mass was excised from the palm of the right hand. During the following 2 months he developed symptoms of mercury poisoning with tremor of the arms and legs, ataxia, and severe headache. He became nervous and irritable, was never perfectly well from this time onward, and attended his doctor for many and varied complaints. In 1947 he had an attack of vomiting accompanied by vertigo and nystagmus which necessitated admission to hospital. Since this time he has complained of a staggering gait, of feeling miserable, and of continuous headache. Exposure to mercury ceased in March, 1948. When he was examined in January, 1951 there was no clinical evidence of chronic mercury poisoning. He was found to have vertigo, fine nystagmus, and a paresis of the right external rectus muscle. Both eyes had been trephined for chronic simple glaucoma.

The illustration shows the characteristic appearance in the lens on examination by the slit lamp, of a brownish, sharply-defined anterior band (*a* and *b*). It was the unusual definition of this band that first drew our attention to it. Examination with high power (*c*) showed it to be very finely granular and to have an iridescent sheen.

Atkinson (1943) examined seventy people who were or had been engaged in the manufacture of thermometers and found mercurialentis in 37, all of whom had been in close contact with mercury for from 3½ to 30 years though some had been out of contact with mercury for 10 to 20 years. Only fourteen of the seventy showed symptoms of chronic mercurialism, and all these showed mercurialentis.

Locket and Nazroo (1952) reported eye changes in 29 out of 51 men employed as direct current (DC) meter repairers. The DC meter consists essentially of an armature disk which revolves in a mercury bath between the two poles of a magnet. In the process of cleaning the meter, the armature disk is scraped in a lathe and particles of mercury in a finely divided form pass into the atmosphere. Twelve of the 29 men were found to have the brown reflex from the anterior capsule of the lens, ten had fine punctate lens

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opacities, and 23 showed well-marked vascular changes at the corneoscleral junction. The brown reflex was only present in men with more than 5 years exposure to mercury.

It would seem therefore that mercurialentis is a common sign of long exposure to mercury; it may be the only sign and once formed is permanent. Although the condition is usually of industrial origin, it can also be caused by prolonged use of yellow mercury ointment on the skin and even on the lid margins (Rosen, 1950).

Our thanks are due to Miss Joy Trotman for the painting of the eye.

REFERENCES

- ATKINSON, W. S. (1943). *Amer. J. Ophthal.*, **26**, 685.
ROSEN, E. (1950). *Ibid.*, **33**, 1287.
LOCKET, S., and NAZROO, I. A. (1952). *Lancet*, **1**, 528.