BILATERAL PAPILLITIS FOLLOWING ANTIRABIC INOCULATION: RECOVERY*

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On April 6, 1932, a healthy looking Anglo-Indian lady, aged 31 years, came to see one of us (H.S.C.) with the following history:

On about March 27, 1932, the sight of her right eye began to go dim and three days later her left eye began to go dim also.

When first seen, on April 6, her sight was: Right eye 6/36 and left eye = No perception of light.

Both pupils semidilated: Right pupil contracted to light but did not remain contracted. There was also a consensual contraction of left pupil and it also was not maintained.

The left pupil was quite inactive to direct light and there was no consensual reaction. The ophthalmoscope showed a typical papillitis of both discs. A swelling of between 1/2 to 2 dioptres in each. No haemorrhages or exudates. Apart from her very natural mental distress she was not ill.

She was admitted to the Rangoon General Hospital, and the first physician was asked to examine her with the object of finding a cause for the condition. His results were uniformly negative. Her other cranial nerves were normal. She was put on mercury, potassium iodide and strychnine injections.

Towards the end of the second week of her stay in hospital she said the sight of her left eye was coming back. One was doubtful of this till it was noticed that the pupil of that eye was beginning to react to direct light.

From this time onwards the improvement in her sight in each eye continued and she was discharged at the end of two months with full vision (6/5) and full fields in her right eye. Her left eye was the same except that she complained of a faint "shimmering haze" in front of this eye. This was due to a small centro-caecal scotoma which shows up on a Bjerrum's screen with a 2 mm. test object (white) at one metre. Her distant vision in this eye was 6/5 three letters and she read Jaeger No. 1 correctly but much more slowly than she did with her right eye.

Up to this time we were unable to find any cause for the condition and were quite in the dark as to the aetiology. The mercury treatment was stopped after a week as her Wassermann reaction was negative.

Some weeks after her discharge from hospital it was discovered by a mere chance that she had recently undergone a course of antirabic treatment at the Pasteur Institute, Rangoon, and that her sight became affected about five or six days after her last antirabic injection. She had not connected her eye trouble with the antirabic inoculations and had therefore not reported it to the Pasteur Institute, nor mentioned the inoculations at the hospital.

Details of Antirabic Treatment.—The patient, a healthy, normal woman, was bitten by a dog, which was certified rabid, on March 3, 1932. She reported at the Pasteur Institute, Rangoon, on March 5, two days after the injury.

There was one deep bite on the arm, inflicted through the bare skin; the wound had been cauterized with pure carbolic acid.

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She was given Class III treatment, *i.e.*, 5 c.cm. of a 5 per cent. carbolized sheep vaccine, for 14 days, receiving in all 3.5 grammes killed sheep fixed virus. She attended regularly from March 5 for her treatment, which was completed on March 18, 1932.

No untoward symptoms whatever were observed during the course of treatment.

A few days ago (April 4, 1933) her eyes were examined again. This is just over one year since the disease started. Except for the small scotoma her eyes are normal. There is no peripheral contraction of the fields. The optic discs are of a healthy pink colour. Edges distinct. Good physiological cups with cribriform plate well shown at the bottom of them. The blood vessels are normal. At no time were there any exudates or haemorrhages. The latter were looked for even with a red-free light. Right vision 6/5 and J.1. Left vision 6/5 three letters; J.1 slowly but accurately.

**Discussion.**—The question as to whether this case is an example of the so-called "post-inoculation paralysis" is an interesting one. As is well known, antirabic inoculation is occasionally followed by disorders of the nervous system which, though their aetiology is still undetermined, have undoubtedly a causal connection with the inoculation.

These nervous disorders present a great diversity of form, varying from slight weakness of one or both legs, or simple facial paralysis in the mildest cases, through a more severe condition with complete paraplegia, to a very grave and exceptionally fatal ascending paralysis of the Landry type.

Such are the forms in which these disorders are usually manifested, but affections of almost every part of the nervous system, including the various cranial nerves, have been reported.

A careful search of all available literature has failed to bring to light any case similar to this one, in which the part of the nervous system affected was the optic nerves themselves, but there seems no reason to suppose that this part of the nervous system should necessarily be exempt from attack by a disease whose incidence on that system is so wide-spread.

In a personal communication to one of us, Lt.-Col. H. E. Shortt, I.M.S., Director, Pasteur Institute of India, Kasauli, states that he recollected seeing a report in which optic neuritis, or at any rate blindness, had been observed in animals after antirabic treatment; but he, too, was unable to find the actual reference.

The following points are in favour of this case being one of post-inoculation paralysis:—

First, the fact that no other cause for the condition could be discovered, at a time when nothing was known as to previous antirabic treatment.

Secondly, the incubation period—about 20 days from the first treatment—corresponds with that observed in cases of post-inoculation paralysis, practically all, if not all, of which occur within the first thirty days, reckoning from the date of the first treatment.

Thirdly, remarkably complete recovery from such a severe condition. Except in the gravest cases and those of the Landry type, the prognosis of post-inoculation paralysis is good, and the tendency is to complete recovery after a longer or shorter period. In this case, serious as the damage appeared to be, both eyes had returned practically to normal in little more than two months.