wife could have given sufficient evidence to convict him of simple drunkenness even, and she would have preferred to take her chances of violence at his hands. In a few days he became weaker, and, a distant male relative having been summoned, his liquor was taken away. He also grew more delirious, and in this state I advised his removal by force to the Washington Home, where he remained seven days without becoming rational. At the end of that time he was entirely oblivious to his surroundings, and, though at times unmanageable, was quite exhausted. He refused food when offered him, because his family was dead and he was dead, and it was no use giving food to a dead man. He having been without liquor for a week, it was possible to certify that his condition was not the immediate result of drink, and he was sent to Danvers on the certificates of Dr. Day and myself.

(To be concluded.)

OPTIC NEURITIS AFTER MEASLES.¹

BY O. F. WADSWORTH, M. D.

THE occurrence of neuritis optici as a sequela of measles appears to have been so rarely observed, at least so rarely reported, that it may be worth while to put on record the three following cases. The neuritis can, indeed, hardly be regarded as a direct consequence of the disease of measles itself; it is rather to be looked upon as the result of a complicating meningitis. In two of the cases the evidence of the latter disease is patent enough; in the third, however, almost the only sign of cerebral affection is given by the ocular symptoms, and on this account especially is it of interest.

J. H. R., aged four, was brought to me at the Massachusetts General Hospital, July 18, 1878, on account of loss of sight, first noticed the day before. He was the second of four healthy children, of healthy parents. The previous winter and spring he had had, occasionally, flushed face and headache, with sometimes vomiting. Aside from this he was well and strong. About the 1st of June his brother, and soon after his sister, had measles. Some two weeks after the brother was attacked this boy began to ail. For several days he was heavy, complained of headache, vomited, had epistaxis and cough; then a scanty eruption appeared. He was lightly sick some four days longer.

The next fortnight he was about, and apparently as well as ever, but during the third week was in bed, face flushed, complaining constantly of headache, twitching in his sleep and starting awake suddenly, saying it hurt him when touched, and vomiting food.

Once more he was up and about, seeming well. On the fourth day, however, when he came in to dinner, after running about playing with a kite, his mother observed that he groped for his plate on the table. The plate was moved to another part of the table, and the boy had great difficulty to find it. During the following night he was very restless, in the morning eat nothing, and was brought to the hospital.

He was in very good flesh, had fair color, and, except his evident blindness, showed no sign of sickness. The pupils were large, and reacted but little to light. Only the movement of the hand at a short distance could be distinguished with either eye. In each eye the disc was prominent, with striated, grayish surface,

the swelling hiding the outline of the disc, but not extending far beyond its border. The central vessels were visible on the surface of the swollen disc, and curved sharply down its sides; the veins a little enlarged. No hæmorrhages. Remainder of fundus normal. No urine could then be obtained.

Two nights afterwards there was great restlessness and unwillingness to be touched; in the morning headache and vomiting, and soon he became semi-comatose. Throughout the next day there was slight twitching of hands, feet, and mouth, and for several hours in the following night violent screaming. From this time he improved slowly, and after a fortnight seemed strong, had good appetite, gained flesh rapidly, and was bright and talkative.

On August 17th he was ruddy, stout, and apparently in excellent condition. Vision was entirely wanting; pupils insensitive to light. Swelling of the discs had much diminished, and the grayish striation was giving place to paleness. The outline of the discs was readily seen, though veiled. The arteries were somewhat small. Otherwise fundus normal. Urine normal.

During the next month his general health was very good, and he still gained in weight; but he had, both waking and sleeping, occasional attacks of sudden fright, shrieking, with gestures of terror, and saying he saw pigs, dogs, and horses, becoming quiet as soon as touched by his parents. September 21st the discs had become sharply defined, white; the main vessels were rather small. Blindness continued. For six weeks longer there were a few attacks of fright, then they ceased. Only once during this time did he complain of headache. After the weather became cool, and he was confined to the house, he lost his ruddy color, but not his flesh, and had sometimes nausea and vomiting in the morning. Urine examined again in November was normal; examination of chest and abdomen negative. Toward the end of January, 1879, when he was last seen, the discs were a little more gray. There was no other change.

H. G., twelve years old, was seen in consultation with Dr. H. E. Marion (to whom I am indebted for notes of the case) June 21, 1879. He was one of two children, a sister, younger, having partial paralysis of lower extremities since early infancy. Parents healthy, and in comfortable circumstances. The patient had had no serious illness till the present one. About Christmas, 1878, he had measles, from which he was supposed to have made a good recovery; but a month later, the last of January, 1879, he began to complain of occipital headaches, which were followed by vomiting and sleep. In March the headaches became more frequent, and he had often pain in different parts of the body; he began to lose flesh, was disturbed by noise, and would start out of his sleep as if frightened. This condition continued, and early in June it was noticed that he did not see objects readily. Dr. Marion saw him first on June 19th, and found vision much impaired and field narrowed; poor appetite, some constipation, urine normal; physical examination of lungs and heart negative.

Two days later I saw him. The pupils were rather large, reacted to light and accommodation. $V:R = \frac{1}{2} \frac{1}{8}$, $L = \frac{1}{2} \frac{1}{8}$. The outer half of each field of vision was wanting; the inner half was contracted, particularly in the upper part; in the R a defect of nearly the whole upper and inner quadrant. In both eyes the discs were swollen, opaque, the sides of the swelling rather

¹ Read before the American Ophthalmological Society.

steep, the opacity extending some little distance into the retina and shading off gradually. Numerous fine vessels on the discs; veins moderately enlarged and winding; both veins and arteries hidden here and there. Opacity a little more marked in L. Near to the outer side of the swelling were several small, whitish spots in R; a few similar spots in L. Abnormal reflex in the macular region. No hæmorrhages. The boy's walk was a little unsteady, as he said, because he could not see. No staggering with eyes shut and feet together. Dr. Marion and I agreed in the diagnosis of meningitis.

For a few weeks headaches were less frequent; his appetite became good, and he began to gain flesh. Then he had severe intermittent pain in the temples and darting pains about the head, with frequent vomiting. Towards the end of July he had a slight epileptic attack, followed by severe pain in the distribution of the left facial nerve. Noise disturbed him much. The first part of August, Dr. Williams and Dr. Minot saw him, and agreed with the diagnosis already made. Sight failed, till he could not distinguish light from darkness. August 19th there was a circumscribed swelling over the anterior inferior angle of the right parietal bone, which yielded to pressure, and resumed its shape when pressure was removed. A week later a similar swelling on the left side. He had some hallucinations of sight. Hearing became defective. At times there was severe pain in the left mastoid region; later in cartilage of left ear.

By September 9th, his head had increased in size by measurement. He had occasional convulsive movements; the scalp was tender. By the first of October he could scarcely walk alone; at times much fever; almost complete paralysis of rectum; much difficulty in passing urine; appetite good, and he slept well.

From the last part of October till December 24th, when he died, he was under the care of a Spiritualist in another city. Dr. Marion first learned of his death shortly before the funeral, — too late to obtain an autopsy.

M. J. A., a girl, three and one half years of age, was sent to me by Dr. Howe, of Lawrence, April 29, 1880. Family history good; she fairly healthy. The last days of March she began to ail; the eruption of measles appeared on the seventh day. For two or three days before the eruption appeared there was high pulse and temperature, and some delirium at night. During the eruption she complained of headache for two or three days, not afterward. While the eruption was fading, marked convergent strabismus appeared, said by the parents to have been at first of both eyes, but more of the right. Shortly after the strabismus was noticed the mother observed that the child, when trying to pick up an object from the floor, would estimate its position wrongly. For a week or two longer there was anorexia, constipation, and cough; afterward she seemed as well as usual.

During the last few days before I saw her the strabismus had decidedly decreased. I found a moderate convergence of the right eye, and at least no marked deficiency of excursion. Vision could not be determined with any accuracy. The discs were blurred, striated, little swollen; the opacity was enough to hide the outline of the choroidal opening, even with the inverted image, but did not hide the central vessels. It extended over a space of some 2-2½ diameters of the disc. Central vessels of normal size. No hæmorrhages.

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The child continued well; slept well; gained in weight. When I saw her again, July 10th, her eyes were straight, and, the father said, had been so for six weeks. Every sign of neuritis had vanished; the discs were defined, bright, and of normal appearance. So far as could be determined in so young a child vision was not affected.

The complication of measles by meningitis does not appear to be a frequent one; much more infrequent is it to have meningitis come on after a period of apparently normal convalescence from measles. Given the meningitis, and the fact of neuritis has in it, of course, nothing peculiar.

In the first case the symptoms immediately preceding the outbreak of the eruption were hardly enough to have excited suspicion of serious cerebral disturbance; yet it may be that a meningitis existed from the first, becoming latent for a time, then bursting into activity, and again, after a second period of quiet, starting up with more violence than ever.

In the second case there is no history of cerebral symptoms with the attack of measles; only after a period of uninterrupted convalescence did such symptoms show themselves. The question might indeed be raised whether the meningitis was, properly speaking, a sequela of measles, and not rather an independent affection.

If the case stood alone, one might scarcely feel justified in asserting any intimate relation between the two diseases. Taken in connection with other cases, however, remembering that in the first case reported there was a fortnight of apparent good health after not very marked head symptoms, that this patient had been sick for several months before his history was obtained, and that very possibly some data may have been omitted by the parents, the assumption of direct connection between the measles and the meningitis does not seem unjustified.

The third case is chiefly remarkable for the almost total absence of symptoms of meningitis, except those to be observed in the eyes. But the occurrence of paralysis of the abducens, together with double optic neuritis, can hardly admit of a doubt as to this diagnosis.

Hospital Practice and Clinical Memoranda.

MASSACHUSETTS GENERAL HOSPITAL.

CASES OF TRACHEOTOMY PERFORMED BY DR. J. C. WARREN.

[REPORTED BY C. P. STRONG.]

CASE I. M. G., three years old, had been ill with diphtheria three weeks before entering the hospital, but for some time had been convalescent. Severe dyspnoea followed an imprudent exposure, for which tracheotomy was performed. Complete relief was obtained by the operation. A coarse, moist sponge was loosely tied over the tube by a gauze cravat. The inner tube was removed hourly and the outer tube daily. A disk of oil silk was kept between the tube and skin as a protection to the wound. The external tube was out a longer interval each day; but it was two weeks before it could be entirely dispensed with. A tin trumpet facilitated the return of air through the glottis.