ART. X.—*Acute General Tuberculosis, with Left Oculo-Motor Paralysis, after Measles.*^a By SIR JOHN MOORE, M.A., M.D., M.Ch., D.P.H. Dubl.; D.Sc. (*Hon. Causá*), Oxon.; F.R.C.P.I.; Honorary Physician to H. M. the King in Ireland; Senior Physician to the Meath Hospital and County Dublin Infirmary; Professor of Practice of Medicine in the Schools of Surgery, Royal College of Surgeons in Ireland.

ON visiting the Meath Hospital on the morning of January 5, 1916, I was met in the Entrance Hall by a woman, accompanied by her daughter, Alice L., aged four and a half years. She presented the following note from Dr. Ella Webb, Medical Officer, of St. Patrick's Dispensary, 35 Upper Kevin Street, Dublin :—" 4/I./16. — Dear Sir John,—This is a queer case. The ptosis was quite sudden, and the speech is beginning to be affected. Now there seems to be some febrile complication (temperature 102° this evening).

Dr. Webb subsequently favoured me with the following notes :—" The child was brought to me the evening before she entered hospital. On examination the most remarkable feature was the complete ptosis of the left eyelid; there was also paralysis of the sphincter of the iris. The temperature was 102°, and there was a light diffuse scarlatiniform rash all over the body. The child was drowsy and fractious, but not more so than any young child would have been at that hour (it was about 9.30 p.m.). She was not in any sense comatose. The parents had noticed a slight slurring of the speech during the day, but the tongue was protruded normally, and there was no sign of any paralysis of any nerve but the third. The history was that the child had been quite healthy until she had contracted measles a few weeks previously, after which she had broncho-pneumonia (?) or some similar chest

^a Read before the Section of Medicine in the Royal Academy of Medicine in Ireland on Friday, February 4, 1916. [For discussion on this paper see page 211.]

trouble. There was some congestion at the base of one lung, and the child had a cough."

On questioning the child's mother, she stated that the child had suffered from measles nine weeks previously. The family lived in Francis Street, and the father was a labourer. The child was admitted at once.

On admission, the axillary temperature was only 96° F. The pulse rate was 86, and the respirations were 28 per minute. The child was quite conscious and very intelligent. She answered questions more by gestures than by speech. Her tongue was thickly coated. The most striking signs of illness were in connection with the left eye. There was complete paralysis of the left third nerve. Absolute ptosis, wide dilatation of the left pupil, inability to turn the eye inwards or upwards, slight external strabismus, and loss of power of accommodation and of contraction on exposure to light. The fourth and sixth nerves seemed to be unimpaired in power and function.

Next day (January 6) the morning temperature was 100.2°, but the pulse rate had risen to 136, the respirations being 28 or 30 per minute. There was no material change for a few days beyond a gradual decrease of body-temperature, which was markedly subnormal (96.4° F.) on the morning of January 11, rising only to 98.2° on the evening of that day.

In the meantime, being anxious to learn as much as possible about the probable cause of the eye-palsy, I asked Dr. Euphan Maxwell to examine the child with a view also to diagnosis. This she very kindly did on Saturday, January 8, and again some two days later. Her report runs as follows :—

" O.D.—Pupil dilated and immobile; muscular movements apparently normal (external).

" O.S.—Complete third nerve paralysis.

" Ophthalmoscopic Examination :—O. D. — Chorioid very thin; disc apparently normal, except for some congestion of the inferior veins.

" Examination of the left fundus :—Disc somewhat

pale. I could detect no congestion. Isolated patches of chorioiditis. Chorioid very thin as in O.D. I would suggest congenital syphilis as a very possible cause of the condition."

Before I received this report I had arrived at a presumptive diagnosis of tuberculosis; and after the semi-collapse temperature on January 11, this diagnosis became more and more probable. The objective evidence of lung trouble increased. The child's strength failed rapidly. Her bright intelligence gave way to a listless mood, which gradually merged into semi-coma. The abdomen shrank and assumed the scaphoid shape so characteristic of meningitis, and especially of the tubercular form. Temperature once more became subfebrile; vomiting set in and recurred again and again. Complete unconsciousness supervened, and the child died in the early morning hours of Saturday, January 15, on the eleventh day after her admission to hospital.

A very thorough *post-mortem* examination was made twelve hours after death by Dr. R. Brontë, Pathologist to the Hospital. He has kindly furnished me with the following note as to the *post-mortem* findings:—

"Disseminated tuberculosis of both lungs and also of the mediastinal and seri-bronchial glands. Very profuse tuberculosis of the pericardium, diaphragm, liver, kidneys, spleen, and peritoneum. Extensive tubercular basal meningitis. No involvement of the nucleus or of the intracranial course of either third nerve was observed on hardening and examining sections.

Writing on the "Eruptive and Continued Fevers"^a in 1892, I observed: "Acute miliary tuberculosis often supervenes upon an attack of measles, the tubercles invading specially the lungs and the membranes of the brain." And, in discussing treatment, I observed:^b "The prevention of acute tuberculosis may be attempted by

^a Text Book of the Eruptive and Continued Fevers. Dublin; Fannin & Co. 1892. Page 146.

^b *Loc. cit.* Page 153.

change of air, wholesome surroundings, a nutritious diet with goat's milk and koumiss (mare's milk fermented), syrup of the chloride of calcium in milk, cod liver oil, syrup of the iodide of iron, compound syrup of the hypophosphites, or of the phosphates, and syrup of the lactophosphate of lime." I fear that in the case of the poor child, the subject of this clinical record, advice on such lines would have been a counsel of perfection indeed.

In his classical monograph on "Measles," in Nothnagel's *Encyclopedia of Practical Medicine*, Theodor von Jürgensen, of the University of Tübingen, having discussed the complication of broncho-pneumonia, proceeds^a :—

"Tuberculosis developing in the course of measles merits, on the other hand, closer attention. Although this form of inflammation, too, has only a distant connection with the original disease, still its comparative frequency as a sequel to the latter calls for a word of explanation. The bronchitis is the connecting-link between the two infectious processes, or in exceptional instances this rôle is assumed by an intestinal catarrh of extended duration.

"Autopsies on children who have succumbed to tuberculosis following measles frequently show the thoracic lymph nodes (bronchial, tracheal, and mediastinal nodes) to be the seat of a former tubercular inflammation; they are found filled with caseous masses, and often contain fresh tubercles in addition. This is the picture most frequently presented. Auto-infection from such a focus of earlier inflammation takes place in the manner usual with children, manifesting itself as a general miliary tuberculosis, but chiefly involving the brain and its membranes, death being due to the cerebral process. The lungs remain comparatively unaffected, pulmonary symptoms certainly not playing a prominent part in the disease."

In his excellent work on *Infectious Diseases*, published

^a English Edition. 1902. Philadelphia and London: W. B. Saunders Company. Vol. III. Page 318.

in 1909, Dr. Claude B. Ker, Medical Superintendent of the City Hospital, Edinburgh, states that "occasionally a miliary tuberculosis may follow measles, and meningitis may accompany the lung symptoms." Dr. Ker introduces the paragraph in which this statement is made with the words: "As a French physician has well observed, measles is essentially a 'maladie tuberculisante.' " ^a

But, after all, the main interest of the case now reported centres in the ocular paralysis and the occurrence of chorioiditis. In the tenth edition of Sir Henry Swanzy's "Handbook of the Diseases of the Eye," ^b Mr. Louis Werner observes that "disseminated chorioiditis is due to acquired syphilis in a considerable number of the cases, and possibly in some it may be tubercular. But in a very large proportion of cases no ascertainable cause exists; and these cases, there is reason to suspect, are congenital, and probably many of them are dependent on an inherited syphilitic taint."

No evidence was forthcoming that Alice L. was the subject of inherited syphilis. But it is interesting to recall that chorioiditis has been shown to be due to the toxæmia caused by another spirochæte—the *Spirochæte recurrentis*, or *Spirillum obermeieri*—the causal organism of relapsing fever. J. A. Estlander, in a paper ^c published in 1869—"Ueber Chorioiditis nach Febris typhosa recurrens"—showed that the starting point of this eye-complication is in the chorioid, and especially in the ciliary body. Estlander was long anticipated by Dr. Arthur Jacob, of Dublin, who contributed to the fifth volume (that for 1828) of the *Transactions of the Association of Fellows and Licentiates of the King and Queen's College of Physicians* a paper entitled: "On Internal Inflammation of the Eye following Typhus Fever." I have read Dr. Jacob's paper, but the affection he describes was appar-

^a Infectious Diseases. Oxford Medical Publications. 1909. Page 38.

^b London: H. K. Lewis. 1912. Page 196.

^c *Archiv. für Ophthalmologie*. 1869. Band XV. Abtheilung II. Page 108.

ently panophthalmitis—at least in the more severe cases. There is, however, a passage in Dr. Jacob's paper which seems to bear on my case. He writes :^a " The inflammation in the majority of the cases seen by me, made its appearance within six weeks or two months after recovery from fever ; in some instances, however, it appeared before the patient left the hospital, and in others not for four, five, or even eight months. Both eyes are seldom affected ; I do not think that I have met a case in which more than one was attacked."

The question as to the exact cause of the pronounced left-oculo motor paralysis must, I fear, remain unsolved. After hardening, a detailed histological examination of the nucleus of each third nerve was made by Dr. Brontë, but no evidence of direct tubercular mischief was forthcoming at that point or in the intra-cranial course of either oculo-motor nerve. As the left eyeball was not removed, it is not possible to state what was the condition of the corresponding oculo-motor nerve in the orbit, or within the area of its final distribution.

^a *Loc. cit.* Page 470.

NURSES AND THE Y.M.C.A.

ALAS ! many of our sailors and soldiers have serious cause to be grateful to their nurses, serious because their wounds have often been of a terrible nature, and grateful because these good women have nursed them back to life. Mrs. Alec-Tweedie's Hut Scheme has grown apace. She has received various contributions from nurses, and now suggests that if nurses in hospitals and institutions will each subscribe one penny and send her the result to 30 York Terrace, Harley Street, London, W. (cheques crossed London County and Westminster Bank, marked " Nurses' Fund ") she thinks it would be a very good idea, when sufficient money had been collected, to put up a Hut for our fighting men and call it " The Nurse." So many more Huts are still required that it would be possible to name some after particular towns, fallen soldiers, or groups of workers like the Farmers, the Navy, the Nurses, the Boiler Makers, or the Leather Workers.