TETANY ASSOCIATED WITH MUco-MEMBRANOUS COLITIS AND PHThISIS.

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TETANY and muco-membranous colitis are somewhat rare conditions, and the occurrence of both in a phthisical person at the same time, the one obviously dependent upon the other, renders the case about to be described worthy of being placed on record.

E. T., female, aged 21, and employed as a packer in a confectionery, was admitted into the consumption hospital at Bridge of Weir on March 21st, 1903, with a history of cough, with expectoration, loss of flesh and appetite, and some loss of strength of eight months' duration.

Family History.—It was stated that her father and a brother had died from pulmonary tuberculosis. In connexion with the supposed relationship between colitis and the rheumatic diathesis it may be mentioned that two brothers had suffered at one time from acute rheumatism.

Previous History.—The patient's health prior to the onset of her present illness was considered good. With the exception of an attack of pleurisy a year before admission she had been free from any serious illness. Menstruation commenced at the age of 14, but had never been regular; there was a slight leucorrhoeal discharge, which increased in amount for a few days before the menstrual period. For some considerable time patient had suffered from occasional intercurrent attacks of diarrhoea and shooting pains in her back and loins.

Condition on admission was good. Though thin she was not emaciated; her complexion was somewhat pale, and her mucous membranes were poorly injected. Pulse, temperature, and respirations were normal. On the right side of the neck, close to the angle of the jaw, there was a mass of enlarged lymphatic glands, while more anteriorly were some old puckered cicatrices. The percussion resonance over the right upper lobe in front was diminished as compared with that on the left side, while the vocal resonance and tactile fremitus were increased. The respiratory murmur was harsh with the expiratory portion unduly prolonged, and a series of medium-sized crepitations was heard. Over the supraspinous and scapular regions behind harsh respiratory murmur and medium-sized crepitations were audible. The left lung appeared normal. The sputum was scanty, and no tubercle bacilli were found on staining by Ziehl-Neelsen's method.

Progress.—During the first three months the patient responded well to treatment and gained 1 st. 5 lb. 8 oz. in weight. She was however very much troubled with constipation, alternating with attacks of diarrhoea. Apart from this she remained in excellent health until the beginning of July, when she began to complain of pain after food, with headache and giddiness, and in consequence was placed on modified diet and ordered to rest for one hour after each meal. On July 7th there was a paroxysm of acute abdominal pain. The motions as observed at this time were small and hard, occurring in round or bullet-shaped masses, somewhat slimy, and streaked with bright red blood. A striking feature at this time was the sudden change which took place in the disposition of the girl. From being a happy and contented individual she became emotional, extremely irritable, and at times hysterical, while tremor of the hands with slight twitching of the mouth, especially marked when addressed, was observed. From this date on to the beginning of August there were periodical attacks of abdominal pain varying in severity, and occurring at intervals of from a few hours to several days. The pain, which was burning in character, was at times very acute, and was referred for the most part to the regions of the ascending, transverse, and descending colon, where palpation elicited tenderness on deep pressure, and a definite feeling of resistance. During the most severe paroxysms there were noisy eructations, and the passing of much flatus per rectum. On one or two occasions there was sickness, the vomit consisting of rejected food or bile-stained mucus. The tongue was very foul, and was covered, except at its tip and edges, with a thick yellow fur, while the breath had a peculiarly disagreeable odour. The stools during this time had changed in character. They became softer and more slimy, and were at times watery, while mucus and shreds of membrane, and at intervals blood in small quantity, either bright red or altered in colour, were passed. In appearance the mucus was not unlike sputum, so much so that the nurse in attendance asked the patient if she had been swallowing her sputum. The shreds of membrane were for the most part small in size, the largest not exceeding 4 in. in length; they were light brown in colour, thin, translucent, and gelatinous. The mucus and membrane were occasionally passed in contact with or partially surrounding the motion when formed, but more frequently they were distinctly separate from it; at times following the desire to defaecate mucus alone was passed. Microscopically the membrane consisted of dense layers of mucus containing a few round and columnar cells. The edge of the membrane was sharply defined, thicker, and less translucent than the surrounding mucus, and here and there appeared rolled on itself. Meanwhile the patient's general health had suffered; she had lost over a stone in weight, and was feeble and low-spirited. From the onset of the symptoms the temperature had shown a tendency to rise, averaging about 100° F. in the evening, and reaching a maximum of 101.8° F.; before the attack the average evening temperature had been 99.4° F. Towards the end of the first week of August patient's condition commenced to improve. The stools became more normal in appearance,

and contained less mucus and only a few shreds of membrane. She was free from acute pain, but there remained a feeling of discomfort, described by her as a tight feeling in the upper part of the abdomen. As she complained of hunger, and appeared to be steadily improving, she was allowed a light diet, and was permitted a few days later to rise for a short time in the afternoon. On August 30th there was a return of the abdominal pain, with a little blood and an increased amount of mucus in the stool. On the following morning there were two motions containing some bright red blood. About midday a considerable quantity of blood was passed per rectum, preceded by severe abdominal pain. Immediately following the discharge of blood the girl had a severe and characteristic attack of tetany. When seen she was lying on her back with an anxious expression on her face and evidently trying to articulate something, which was subsequently found to be "I can't open my hands." The tonic spasms were severe, and affected the face as well as the extremities. The thumbs were flexed and pressed tightly into the palms of the hands, while the fingers flexed at the metacarpo-phalangeal joints were extended at their terminal joints. The hands were flexed at the wrist and the arms were crossed on the chest; occasionally they were held out in front as the patient vainly endeavoured to control the spasm. The feet were arched, and extended at the ankle-joint while the toes were crowded together, being adducted and strongly flexed. During the height of the paroxysm the patient was quite unable to articulate distinctly; the mouth was partially open and the lips pursed together as if she were trying to whistle. As the spasm lessened the angles of the mouth were retracted. The tongue, according to the patient's statement, was forcibly drawn to the right side of the mouth. The face was very pale, the extremities cold and the pulse feeble. The girl, in describing her sensations during the paroxysm, stated that she felt her limbs cold and could not stretch them out as her sinews appeared to be all drawn together; her face felt cold and stiff and her lips as if they were being drawn out and pressed together. Patient was warned of the attack coming on by feeling sick and shaky, and after the spasm had ceased there was feeling of numbness and a sensation of pins and needles in the limbs and face. There were only two severe paroxysms, the second occurring about three hours after the first, but for some days tremor of the hands and twitching of the facial muscles remained. The spasm was easily controlled by hypodermic injections of hyoseyn, hydrobrom. and considerable relief was obtained by the application of heat to the limbs. During the first few days of September the mucus passed per rectum had increased in amount, but during the second week it gradually diminished. She then commenced to improve, her appetite increased, and she was allowed a more liberal diet. Up to September 12th, the date of leaving hospital, small quantities of mucus were, however, occasionally observed in the stools. No untoward effect was manifested on the lung condition. Cough was slight, and for some weeks expectoration had been absent; physical signs, though still present, were much modified.

REMARKS.

This case is certainly one of unusual interest. The association of tetany with muco-membranous colitis in a case of phthisis pulmonalis must constitute a very rare combination of diseases.

It is true that the diagnosis of phthisis was not confirmed by the presence of tubercle bacilli in the sputum, but the presence of enlarged lymphatic glands and some old cicatrices in the neck, with crepitations over the right upper lobe, and a fairly uniform evening pyrexia, were sufficient to render the diagnosis almost certain.

What the exact relationship between muco-membranous colitis and tetany may be I am not prepared to say, but the association of the characteristic paroxysm of tetany with a form of colitis which is now regarded as a neurosis of the colon presented an interesting clinical picture.

A CASE OF HEMIPLEGIA OCCURRING DURING WHOOPING-COUGH AND DIPHThERIA.

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THE publication by Mr. GOWRING in the BRITISH MEDICAL JOURNAL of December 26th, 1903, of a case of ophthalmoplegia occurring during whooping-cough recalls to mind an interesting case which I had under my care some time ago:

J. J., male, aged 18 months, was admitted to the City Hospital, Aberdeen, on March 31st, 1902, suffering from diphtheria and whooping-cough.

History.—Diphtheria had been diagnosed five days previous to admission; whooping-cough had been present for about six weeks.

Condition on Admission.—The tongue was slightly coated; the throat was reddened and congested; a yellowish-grey membranous deposit partially covered the right tonsil; the submaxillary glands, more especially those on the right side, were enlarged. The breathing was laboured. Examination of the lungs detected the presence of some medium rales. The heart sounds were weak but there was no valvular incompetence. The pulse was soft, compressible, and feeble; the

temperature was 99° F., and the urine normal. Bacteriological examination confirmed the diagnosis of diphtheria.

Treatment.—Two thousand units of antitoxin were injected, and tinct. digitalis (mj) and tinct. ferri perchlor. (mij) directed to be given every four hours.

The child passed a quiet night and next morning (April 1st) seemed better.

Onset of Hemiplegia.—At 3.30 p.m. that day he had a slight attack of coughing; no whoop was heard, but a convulsion occurred which for some minutes looked serious, then gradually subsided. Soon afterwards it was observed that the lower part of the right side of the face as also the right arm and leg were paralysed. The eyelids were now closed and resisted attempts to open them; the conjunctival reflexes were present; both eyes were turned to the left, and movements did not range beyond the middle line; the pupils were medium and reacted to light. The right angle of the mouth was not employed when the child attempted oral movements. The right arm hung limp and flaccid, the right leg was flexed, abducted, and rotated outwards; the patellar reflexes were with difficulty elicited and differed in no respect. There was hemianaesthesia of the right half of the body, with the exception of the right foot, and the upper part of the right half of the face. Later in the day and during the night there were some twelve fits of varying intensity, lasting on an average from two to three minutes. These fits were Jacksonian in character and began with turning, followed by rapid oscillations of the eyes to the right, next twitching about the right angle of the mouth, and ultimately convulsive movements of the whole body. As each attack passed off there was some coughing with expectoration, then the eyes were turned to the left and maintained there. On April 2nd right lateral hemianopsia was noted. The eyelids were now generally kept open. A number of apparently minor fits were observed, affecting only the eyes, which were turned to the right and oscillated rapidly. There were several major fits during the day, and towards evening they became more frequent. Liquid nourishment was well borne, and there were no attacks of vomiting. Ammonium bromide in 1-gr. doses was directed to be given every two hours or oftener if necessary.

After-history.—The fits recurred, though with gradually lessening frequency, until April 6th. The temperature was very erratic, at times reaching 103° F., but never for long remaining at that height. The lungs were resonant, and the urine was invariably free from albumen. The diphtherial membrane disappeared three days after admission. On April 6th the child seemed very drowsy and much weaker. The breathing was rapid and shallow, and on April 7th was of the Cheyne-Stokes type. The ammonium bromide was discontinued. On April 11th the patient seemed better. The coughing and expectoration were much diminished, but the Cheyne-Stokes breathing persisted. On the following day the paralysis of the right side of the face was no longer evident. The Cheyne-Stokes breathing was present at intervals until April 15th, after which date the child's condition steadily improved. By April 24th the hemianopsia had entirely disappeared; the right arm was at times moved from the elbow-joint, the right leg showed no signs of voluntary movement, and on feeding there was no indication of facial paralysis. Sensation had returned in both the right arm and leg; the right half of the trunk was less sensitive than the left. When the child was raised the helpless condition of the right arm and leg was very apparent. On May 3rd, thirty-three days after the onset of the hemiplegia, the child was, at the mother's request, taken home. The right leg now showed signs of returning power. The right arm was capable of voluntary movement only up to the elbow. Anaesthesia had quite disappeared. The mother informed me that prior to this illness the child could talk "wonderfully well"; on the day of discharge he could only utter an inarticulate cry. On June 7th, sixty-eight days from the date of attack, save for some weakness in the right arm, recovery was complete. The child walked well, and the mother stated the power of speech was better than before the illness.

REMARKS.

That the hemiplegia was the result of intracranial haemorrhage will, I think, be readily admitted. Diphtheria had first been diagnosed six days before the onset of the hemiplegia, so that, even if we make allowance for the diphtheria bacilli having been present for a longer interval, the possibility of toxic neuritis is excluded. Moreover the onset of symptoms of, and recovery from, the paralysis were characteristic of a central and not of a peripheral affection.

Whooping-cough had been present for six weeks; during that time the recurrent paroxysms of cough must have exposed the cerebral vessels to considerable strain, which had at length resulted in a rupture, with extravasation of blood. The right hemiplegia, hemianaesthesia, and hemianopsia, coupled with the Jacksonian character of the subsequent fits, served to show that the lesion was subdural, and that the blood clot extended over a considerable portion of the left cerebral hemisphere.

The fate of this haemorrhagic effusion must remain a matter for theoretical speculation. It may have become absorbed, and the fact that the areas which were presumably pressed on by the periphery of the clot recovered first would seem to support this assumption; it may, however, have become encysted, with adaptation of the brain and skull to the presence of this unwelcome host, and thus have led to the ultimate disappearance of the symptoms of compression and

irritation. I regret that I was unable to follow up this case further. It is well known that such children may in time become the subjects of epilepsy, or that their intelligence may remain impaired. Although complete idiocy has been recorded, more often there is only defective mental power or backwardness.

LESION OF POST-CENTRAL CONVOLUTION WITHOUT PARALYSIS.

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In C. S. Sherrington and A. F. F. Grünbaum's¹ experiments on the brains of the higher apes the electrode placed on the surface of the post-central gyrus failed to elicit movements. Large lesions also in this area caused no paralysis. Purves Stewart² stimulated electrically the human cortex behind the fissure of Rolando in the ordinarily assumed position of the leg centre without result. The following case proves that a focus of softening in the ascending parietal convolution is not necessarily associated with monoplegia.

A young man was progressing well, late in the course of a severe attack of enteric fever, when he had a transient epileptiform seizure, the probable date of the onset of the thrombosis. He regained consciousness, and was able to move all his limbs freely. He was observed to feed himself with his right hand. Three days later a sudden recurrence of general convulsions took place, which ended in death after three hours. The brain was removed within two hours of his decease. The veins of the pia mater were blocked on both sides near the fissure of Rolando. The cortex was unaffected, beyond congestion, except in one spot in the left post-central gyrus rather more than 1 cm. in diameter, about 7 cm. from the middle line, in what is usually figured as the arm area. Here the brain substance was blood-stained and very soft, contrasting markedly with the rest of the organ, which was unusually firm. Although the veins on either side were symmetrically plugged, only the group over the focus of softening was surrounded by a zone of ecchymosed pia mater, which thus suggested an earlier date for the thrombosis on the left side. The venous sinuses, veins of Galen, arteries of the base, and iliac veins, were all patent. There was no meningitis. The intestinal ulcers were all but completely repaired.

Eberth's bacillus was recovered from the spleen.

T. Fisher³ noted swelling of the convolutions beneath the obstructed veins in three of his cases, but this was not obvious in the present instance. Meningeal thrombosis is seldom met with in necropsies of enteric fever. This is the only occasion on which I have found it in 160 necropsies of those who have succumbed to this disease in South Africa.

Eugène Dabout⁴ does not appear to mention this complication in his essay on the meningeal forms of enteric fever. It seems probable that it may be the cause of hemiplegic attacks which, with great rarity, may sometimes occur. The case reported by Hödlmoser⁵ of recovery after convulsions in this fever might be explained by meningeal thrombosis, since, as Fisher has pointed out, and as the above example would indicate, the veins of the pia mater can be extensively blocked without permanent brain symptoms arising.

REFERENCES.

- 1 C. S. Sherrington and A. F. F. Grünbaum, *BRITISH MEDICAL JOURNAL*, vol. ii, 1901, p. 1857.
- 2 Purves Stewart, *ibid.*, vol. ii, 1901, p. 1867.
- 3 Theodore Fisher, *ibid.*, vol. ii, 1901, p. 9; and ii, 1902, p. 947.
- 4 E. Dabout, *ibid.*, vol. i, 1902; *EPITOME* (321).
- 5 C. Hödlmoser, *ibid.*, vol. i, 1903; *EPITOME* (2).

ON THE ALLEGED INCREASE OF DISEASES OF THE NERVOUS SYSTEM.

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THERE is a popular idea that diseases of the nervous system are increasing, and especially mental diseases; one writer describes the increase of insanity as terrible, and no doubt the rise from 87,000 to 116,000 in the number of certified insane is a very grave question for the ratepayers, and one that requires very serious consideration, both by those responsible for the legislation necessary for the proper treatment of cases of mental disease and also of those responsible for the administration of the law. The general idea is that the increase in the number in the asylums is equivalent to an