and F. Müller's more recently, tend to show that all muscles in which faradaic excitability has disappeared entirely in the first four or five days are permanently paralysed. In all those in which some faradaic excitability is retained after from the eighth to the twelfth day, motility may be expected to return even though several months may be required. You cannot judge of the future from the existence of reaction of degeneration in the first stage, nor even, as it seems to me, from the disappearance of reaction to both currents. In the patient Mary F—, aged sixteen, who was attacked with polio-myelitis affecting both lower extremities nearly a year ago, four months after the attack the right quadriceps extensor showed no reaction to *either current*; it now reacts freely to twenty cells. In another, Geo. B—, aged twenty-one, whom I present to you, you have the opportunity of comparing his present condition with a note taken by Mr. Broster eleven days after his attack of polio-myelitis twenty-six months ago, when he came into the hospital. There was then no reaction to faradism in any muscle of both *lower extremities*, except the left vastus internus. Those of the *left arm* acted to somewhat strong currents. The muscles of the lower limbs acted to slow interruptions of fifteen cells constant current. At that time, in the *left lower extremity* the only movements practicable were flexion of the thigh on the trunk and rotation of it inwards and outwards; in the *right limb* a very slight flexion of the toes. The left arm was weak and wasted. The patellar tendon-reflex, as well as the skin-reflex from the soles, was absent on each side. Three months later the *right lower limb* still remained motionless and wasted. He could now draw up the left leg and lift the left foot off the bed. The left arm had recovered. A month more and the wasting process had ceased; the thighs and legs had recovered two inches of girth, which they have never since lost. At this time the left quadriceps extensor reacted to faradism. Thirteen months after the attack he could flex the *right leg* a little on the thigh, but could not extend it; could adduct but not abduct it. The patellar tendon-reflex had returned in the left leg, not in the right. More than a twelvemonth has passed since that observation was made. It is very interesting to see that he has still further, though but slightly, improved. He can now extend the right leg a little and flex it readily. There is no reaction to faradism, however, in the quadriceps of the right side, and the contraction to a strong constant current is slight. In the left quadriceps there is still reaction of degeneration and ASZ>KSZ.

Were I called upon to treat a case of this disease from the first I should keep the patient in bed for many months. During the first few hours, if possible, ergot should be given frequently in large doses, but not continued after a week. The muscles should be tested electrically in the course of the second week, for purposes of prognosis. A mild constant current (stable) might be used for five minutes to the spinal cord three times a week, taking care not to give shocks. Any energetic electrical treatment should, however, be avoided. When any tendency to contraction and consequent deformity showed itself, I would let the patient wear in bed some light apparatus to compensate for the paralysed muscles, and I would particularly discourage strenuous attempts at voluntary movement of paralysed muscles, as tending to excite action in their antagonists, and thereby increase the deformity.

REMARKS ON THE PERITONEAL TUBERCULOSIS OF CHILDREN.

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THE disease which has as its essential lesion a deposit of tubercles in the peritoneum simulates in its different forms some other diseases. Thus at one time it may be quite latent throughout its course, at another produce a subacute peritonitis; now showing ascites as its most prominent symptom, and again feigning in its large tumours and nodules a case of malignant disease. Various classifications of it have been offered by different authors. Thus, Drs. Wilks and Moxon in their *Pathological Anatomy* describe three forms—1. Tubercular ascites. 2. Latent peritoneal tubercle.

3. Cases of inextricable union of the bowels and viscera to one another, and to the abdominal parietes. Dr. Bristowe, in "Reynolds's System of Medicine," separating those cases which present obvious indications of abdominal disease, gives two classes—1st. Acute, often resembling enteric. 2nd. Chronic, in which at some period ascites is usually present. In "Ziemssen's Cyclopædia of Practical Medicine," following Kanlich, three groups are distinguished—1st. Acute onset; fitful course; absence of effusion; diffused adhesions and points of resistance. 2nd. Latent onset; ascites the most prominent symptom, and causing others; tumours in the abdomen. 3rd. Like Class 2, but with temporary subsidence of symptoms. Dr. West, in his "Diseases of Infancy and Childhood," classifies according to their symptoms and rapidity of course. Other divisions of the subject have been made by the numerous writers, but they need not be here mentioned. The chief value of these classifications appears to be that they characterise and help to keep in mind the various forms of the malady; they do not aim at an exact scientific basis of division, partly on account of the difficulty that arises in diagnosing the frequently complex conditions, but also because of the doubtful position of cases which present large deposits of caseous material in the peritoneum, the point at issue being whether these ought to be considered as simple, or as tubercular peritonitis.

So as the subject labours under this difficulty the mode of division must be mainly clinical, and we may distinguish the following classes:—

1st. Latent cases of tubercle in the peritoneum—(a) part of a general tuberculous, (b) secondary to tubercular ulcers but purely local.

2nd. Cases characterised by an ascites, which may mask all other conditions.

3rd. Those in which obvious, and often very large, tumours are found, and in a belly not otherwise markedly resistant.

4th. In which all the abdominal contents and abdominal wall are mutually and inextricably united, often with attendant intercommunication of different parts.

5th. Mixed cases, showing diffused adhesions and points of resistance, and running a variable course.

It might be thought that Classes 2 and 3 should be combined, as, indeed, they are in most classifications. They are separated here because a large collection of fluid will prevent the palpation of tumours, and also because some cases showing abdominal indurations have had no effusion throughout their course. The classes have been made strongly contrasting for the avowed object of showing the different aspects of the disease.

1st. The latent form is probably the most frequent, but has nothing to do with the cause of death. Its latency results either from the absence of inflammatory change, or from the obscuring of its symptoms by the more grave affections of other organs. The chief interest attaches to the question of the existence of tubercular ulceration. Pus can be demonstrated in the stools even when the area of ulceration is small, and occasionally the stool may be almost entirely composed of pus; but simple ulceration may yield stools quite identical in character with the preceding. The general aspect of a case of tubercular ulceration was found in another case, post-mortem, to have resulted from albuminoid degeneration of the villi of the small intestine, there being no such change in the liver and kidney. In this case the question arose, whether an ordinary catarrhal diarrhoea might not thus perpetuate itself. I am not aware that this possible cause of an intractable diarrhoea has been worked out.

2nd. Although most authorities state that some effusion of fluid is found during the course of most cases of tubercular peritonitis, this is said to be small in amount, the fact not being usually enunciated clearly that the amount may be so considerable as to produce symptoms of its own—as oedema of the feet and abdominal walls, enlargement of the veins of the abdominal wall, &c. This fact is mentioned by Murchison, who suggests that in these cases there may be a deposit in the portal lymphatics pressing on the portal veins. Be this as it may, a complete and rapid absorption frequently takes place, and it is quite remarkable to see how the child will pick up in health and strength. A little girl, aged six years and a half, who presented marked symptoms of ascites, with a tense and oedematous abdominal wall, had the abdomen reduced whilst under observation 4½ inches in circumference—that is, from 29 to 24½ inches, all signs of fluid

disappearing; and, as is frequently the case, an indurated band then became palpable; the child was then transferred to the country, and returned looking well, but with the band still existing. Sometimes the fluid thrown out is pus, and an abundant discharge occurs from the navel, this continuing for months.

3rd. Tumours are found—that is, well-defined masses, not mere local sensations of resistance. Their situation and shape varies greatly. What is most characteristic is a hard, transverse, ruler-like band, situated about or above the navel, sometimes stretching right across the abdomen, losing its definition at its extremities, or passing into other masses. I have measured one of these, more than eight inches in length. The abdomen in which they are found looks large, and with frequently well-nourished walls, yielding little or no resistance on pressure; and the readiness with which the hand rolls over the band, gives no idea to the touch of an obliterated peritoneal cavity, with closely adherent viscera, such as is found in the following class of cases. A tumour of this kind is usually due to a thickened and rolled-up great omentum; to produce this the process must be chronic and localised, else adhesions form and keep the membrane extended out when either a general resistance is felt or an irregular tumour in front of the abdomen. In the acuter cases, in which there is frequently an opportunity of making a post-mortem, the great omentum may be half an inch thick, with a mass having the granular aspect of aggregated tubercle. In one chronic case I have seen masses like congealed fat or suet and quite structureless, and situated in the omentum, mesentery, and retro-peritoneal tissue; whether these latter cases are to be considered as tubercular it is at present difficult to decide. In a case reported by Dr. Hilton Fagge, in which tubercular peritonitis was mistaken for ovarian disease and operated upon, the peritoneum was found strewn with tubercles and the intestines matted together, still recovery occurred, and six years later the patient was seen fat and well; this shows a power of recovery from extensive tubercular deposit which should make one slow in arguing against their tubercular origin from the mere recoverability of the case. A mass is found frequently in the right iliac fossa, due to thickening of the cæcal wall combined with some enlarged glands here, and general thickening and adhesions of the surrounding peritoneal covering; this is not an uncommon lesion, and results from the fact that a chronic and sub-localised tubercular ulceration is frequently found about the cæcum, and leads to few symptoms but wasting and fever. Enlarged mesenteric glands have been mentioned here as forming part of the tumour, and in fact they often cannot be diagnosed from other masses, but they are not very often felt and still less often demonstrated post-mortem after being felt; but this is due largely to the fact that these cases often recover. It is curious to see the disproportion often existing between the amount of tubercular disease of the bowel, &c., and the enlargement of the mesenteric glands; thus the peritoneum may be strewn with tubercle, and there may be deep ulceration of the cæcum, and of Peyer's patches above, with only moderate enlargement of the mesenteric glands; the great enlargement also which occurs in some cases without any such origin contrasts strongly with the preceding. These cases have also to be diagnosed from cancer of the peritoneum and fæcal accumulation.

The following case may be given as an example of this class:—

Alice C—, aged three years and a half, admitted on April 26th, 1878, into the Hospital for Sick Children, under the care of Dr. Gee. The mother's account was that another of her children had died of consumptive bowels. Alice was subject occasionally to attacks of vomiting and diarrhoea, and for the last three weeks the diarrhoea had been much worse, slime and blood being passed with much abdominal pain; at the same time the appetite was good, and there was no great loss of flesh. The bowel often prolapsed. On admission the child was pale, anæmic, and flabby, but with a fair amount of flesh. The stomach was remarkably large and inflated, but could be readily palpated, yielding no resistance anywhere, and had yielded at the navel, forming a small rupture. Liver about two inches below the ribs on right nipple line; spleen not palpable; the tongue was moist and clean, but pale. The bowels were moved frequently, the motions being offensive, pultaceous, and composed largely of curds with a little slime. Dr. Gee examined them microscopically, and found partially digested muscular fibres, with a few doubtful cells, probably mucous corpuscles. She

was dieted on Swiss milk, raw meat, biscuits and toast, and for medicine took one drachm of compound decoction of aloes three times daily. For three months treatment varied from time to time, was kept up most assiduously, but with little decided result, except that some days the motions were more solid and improved in colour, and the child's general condition was rather better. During this time the spleen enlarged, and towards the end a crop of boils appeared on the head, the child for the first time becoming febrile. Rather more than three months from admission a band appeared, transversely placed, a little above the navel. The child was then sent to Highgate, as it did not improve, the band remaining quite distinct. Part of the treatment employed may be mentioned here, owing to the marked success that it has in cases of chronic diarrhoea in which all else has failed; it was the constant wearing next the abdomen of a large piece of spongio-piline, moistened twice daily with a mixture of two drachms of tincture of iodine and eight ounces of camphor water; it is a most valuable agent.

4. Universal firm adhesions. This, when combined with perforations of the gut and intercommunication, converts the abdomen into a trabeculated cavity. It is amongst these cases we find the character of abdomen so often described—the pigmented, scaling, thin-walled belly, with its wasted, tendinous-feeling muscles, its hard subcutaneous points, and a feeling of tense resistance, due to the immobility of its contents, &c. This fixation of the contents may be felt also in the almost stationary lower edge of the liver during inspiration; this sign often fails from the elevation of that organ above the margin of the ribs. The elevation of the heart at the same time, combined with a retraction of the lung, may so elevate the cardiac dulness as to suggest the existence of enlarged mediastinal glands. Here, too, we have often the most marked symptoms, the extreme degrees of emaciation, with diarrhoea and attacks of severe abdominal pains, leading to a speedy death. The following is a good example of a case of this class:—

Henry G—, aged nine years, admitted Dec. 9th, 1876, under Dr. Dickinson, into the Hospital for Sick Children, Great Ormond-street. There was phthisis in the families of both parents, and two other children had died of tubercular disease. This child had been ill nine weeks with abdominal pain and diarrhoea (the motions pale, and fermenting like yeast), occasional vomiting, cramps in the legs and feet, wasting, and night-sweats. He was a pallid boy, with long, light hair, markedly wasted, and with an anxious, drawn face. The abdomen, in contrast with the rest of the body, was tumid and tense, with distinct veins in the walls, and its rounded contour obliterated all the markings of health; a general want of resonance and resistance, but with no palpable tumours. The tongue clean, but red and irritable. About twice daily he passed a very large, diffluent, ash-grey, offensive motion. The chest showed consolidation of the left apex, and the heart was raised and uncovered, beating in the second and fourth spaces. The child only lived five weeks after this, having feverish attacks, frequently crying out with abdominal pain, progressively wasting, and having a cadaverous smell. After death extensive lung mischief was found. The abdominal contents were so glued together that the intestine could only be cut out in pieces, and at various parts apertures united contiguous parts of the bowel. The liver was firmly fixed all round, and highly fatty.

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THE ORIGIN OF CROSS-LEGGED PROGRESSION (SCISSOR-LEGGED DEFORMITY), ASSOCIATED WITH DOUBLE HIP-ANCHYLOSIS.

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IN the paper which I read before the Clinical Society on October 22nd, directing attention to this peculiar deformity and odd method of progression, I stated that I particularly wished to hear discussed the theory of its origin, and to learn from others their views of its cause. The speakers in the discussion which followed did not agree as to the probable cause, and each theory put forward had much sound