instructions, with his return to ordinary diet, that had occasioned his relapse. He now became obedient, and conducted the cleansing process with regularity daily, or on alternate days, according to circumstances; but he again fell back in May, 1880, and for a time nutrition remained at a low standard. Stricter attention to the washing process was now enforced by the occurrence of severe epigastric pain, which, like the vomiting, was immediately relieved by the use of the siphon; he declared that he could not live without its help.

In May, 1881, when he again presented himself, he was in fair health, and seemed to have nearly recovered his normal state of nutrition; he was washing out every second day, and was taking ordinary diet. In the following May (1882), he was washing out daily, or even twice a day, in order to prevent the occurrence of pain; and, except that he now found it necessary to be particularly careful in his diet, he accounted himself in good health.

In May, 1883, he looked thin and pale; he had intermitted the use of the siphon for a fortnight, but found himself compelled to return to its employment; and his visit was for the purpose of procuring a new tube.

His last visit was in June 1884, the fifth year of his attendance. He washed his stomach every twenty-four hours; he said, "it is the only thing that has saved my life;" he kept the tube always at hand in his office. He had no vomiting, and scarcely any pain. Six months previously, he had weighed 120 lbs. (48 lbs. below his normal). His food consisted of two raw eggs (he could not digest boiled eggs); a quart of milk; a mutton-chop, which he chewed, but spat out the solid remains. He used the siphon generally before his last meal at 6 P.M., the largest meal of the day. His health was good, and he had not had occasion to leave his business for a single day; nevertheless, it will be seen from the report of his diet, compared with that on former occasions, that his digestive force was seriously lessening.

I regret that I cannot make any statement respecting the condition of the stomach as regards dilatation; the disadvantage under which I was placed, in consequence of his making only an occasional brief visit, entirely prevented me from gaining reliable information on this point.

A CASE OF FIBROUS STRICTURE OF THE PYLORUS: ENTEROSTOMY: DEATH.

By G. J. ROBERTSON, M.B., Oldham.

THIS case of fibrous stricture of the pylorus, with dilatation of the stomach, seems worthy of record, from the entire absence, until the disease was far advanced, of symptoms pointing to its true nature, and from the operative treatment conducted with a view to afford relief to the patient. During my attendance, I had the advantage of several consultations with Dr. William Roberts of Manchester.

J. P., aged 47, schoolmaster, was first seen by me on February 1st, 1883. He had been a martyr to indigestion for many years. His chief complaints were, a sensation of fullness and discomfort over the epigastrium, especially after meals; acid eructations; flatulence; constipation; and sleeplessness. It was only after a prolonged fast that he experienced any comfort. These symptoms alternated and varied in severity until within the past six months. Since that time they had persisted and become aggravated, so as to make his life altogether wretched. Without advice, he had come to live almost exclusively on liquid food, and that in very small quantity. He had lost flesh and strength. He had not vomited food for years, had never vomited blood, and was not aware of having ever passed blood by the bowels. He had always been careful and abstemious in his habits, and, with the exception of indigestion, had been free from serious illness.

He was emaciated to a great degree; his complexion was clear; no cachexia or tint of jaundice. The ordinary signs of dilatation of the stomach were well marked. No tumour nor glandular enlargement could be found after careful and repeated examination; no tenderness on pressure, localised or general. The liver-dulness was normal; the urine contained no albumen; there was no blood in the fæces.

During the next three weeks, he continued to lose strength. On the night of February 23rd, he suddenly vomited at least a quart of sour-smelling fluid, which was so absolutely black as to give rise to the belief that the colour was due to carbon: he had eaten charcoal biscuits a fortnight previously. The subsequent character of the vomit decided that it was owing to the presence of blood. For two or three hours afterwards, he frequently discharged, without effort, mouthfuls of fluid. The relief afforded by the vomiting was slight and transient. After a lapse of five days he had a similar attack, but

less severe, followed by others every night or alternate night. During this time, the state of exhaustion was extreme; on two occasions he appeared to be moribund.

The diagnosis was obscure. The evidence of dilatation was ample, even before cumulative vomiting occurred. The extreme emaciation and exhaustion of the patient, and the persistence of the symptoms in spite of appropriate treatment, excited strong suspicion that it was not simple dilatation. What, then, was the cause of the dilatation? The colour of the blood in the vomit suggested cancer, but the entire absence of the earlier symptoms that usually mark this disease, such as pain, tenderness on pressure, vomiting after food, "coffee-ground" vomit; and the absence of cachexia and of tumour, notwithstanding extreme emaciation, were unfavourable to this view of the case. Supposing the blood to be altered in colour by delay in the stomach, it might arise from an ulcer situated close to the pyloric orifice, but there was nothing in the symptoms that pointed to ulcer. Moreover, at the end of each attack of vomiting, the blood was as black as at the beginning. This fact seemed to denote that the bleeding was capillary—an explanation which left the case as open to doubt as before vomiting occurred. On the whole, the negative character of the symptoms, as referring to cancer and ulcer on the one hand, and the grave and intractable nature of the disease on the other, conducted to the belief that there was non-malignant obstruction at or near the pylorus, to which the dilatation of the stomach was secondary, vomiting some time after meals having been averted by the scrupulous care exercised by the patient, both as to the quantity and quality of his food.

Medicinal and dietetic treatment had failed to bring improvement. It was quite obvious that feeding by mouth and rectum could sustain life but a few days at most; while, in the exhausted state of the patient, excision of the pylorus, even had there been the certainty of obstruction there, seemed a hopeless undertaking, and an exploratory incision was almost sure to be useless, unless that operation could be performed. Under these circumstances, it occurred to me that the small intestine might be secured high up and stitched to the abdominal wall, and an opening made in it, through which food might be introduced temporarily or permanently, as the future might determine. The following considerations appeared to justify the experiment. The operation would make no serious immediate demand upon the patient's strength, either from shock or from hæmorrhage, and the risk of peritonitis would certainly not be greater than in gastrostomy. On its completion, the stomach would still be available for the performance of its functions; and food introduced by the new channel would pass over an extensive digestive tract, and be acted upon by the secretions of the liver and pancreas, as well as by the succus entericus.

It was not easy to decide upon the part of the bowel in which to make the opening. *Cæteris paribus*, the nearer the stomach, the better. Choice had to be made between the commencing portion of the duodenum and the upper part of the jejunum. The former was discarded, from the possibility of its being involved, by inflammatory action or otherwise, in the pyloric disease, because, apart from this, the operation would probably be difficult of performance, and because contiguity of the opening in the bowel to the pylorus would complicate the subsequent operation of excision, should that become necessary. Chiefly from the absence of these objections, and, also, partly because it could be kept in contact with the abdominal wall without dragging, the jejunum was selected. The incision in the abdominal wall was made below the umbilicus, in order to avoid the transverse colon. It was proposed to divide the operation into two stages, as in gastrostomy.

The patient having rallied somewhat, with his full knowledge and consent the operation was performed on March 9th, as follows. An incision, nearly two inches in length, commencing immediately below the umbilicus, was made through the abdominal wall, the omentum was gently drawn to the right side, and the knuckle of bowel presenting withdrawn for inspection. Its characters being noted, the course of the bowel was followed, the left hand withdrawing it while the right replaced it in the abdominal cavity. It was soon my decided opinion, and that of my friends present, that we were proceeding in an upward direction, an opinion which was placed beyond doubt by finding the bowel become fixed in the usual situation of the lower end of the duodenum. The bowel, with its length transverse to the abdominal wound, was attached by means of sutures of fine silk, armed with a straight needle at each end, thus: the bowel being held outside the cavity, eight subperitoneal stitches, half an inch in length, were applied so as to form the overlapping sides of an octagonal space, three-quarters of an inch in diameter, the centre of which was opposite the mesenteric border of the bowel. A stitch was also placed in the

centre of the space, to serve as a guide in the performance of the second stage of the operation. The bowel was now replaced in the abdominal cavity, and the needles were made to penetrate the parietal peritoneum at points corresponding to the ends of the stitches in the bowel, and to pass through the muscular wall, emerging in the wound underneath the skin. By gentle traction upon the free ends of the sutures, the bowel was brought into close apposition with the abdominal wall, and the sutures were tied. Dressing of the wound in the usual way completed the operation. The patient rallied from the operation, but died from exhaustion eight hours afterwards.

Necropsy.—The stomach was markedly dilated, and contained a quantity of dark coloured fluid; its walls were atrophied. The pylorus lay in contact with the liver underneath the right lower ribs; it was the seat of fibroid thickening, which extended for two or three inches along the smaller curvature; its orifice barely admitted an ordinary pencil. The part of the jejunum attached to the abdominal wall was nine or ten inches from its upper end; the mucous membrane was uninjured by the sutures.

The worth of this operation depends upon the extent to which the nutrition of the body can be sustained by intestinal digestion. Upon this subject, our present knowledge is scanty. It might be tried in those cases in which life is threatened from failure of the stomach to transmit food into the bowel. By experiment on the cadaver, it would seem that instrumental dilatation of the pylorus could be effected from an opening either in the duodenum or in the jejunum.

On subsequently referring to the literature of the subject, I find that enterostomy was first suggested by M. Surmay, who fully considers the feasibility of the operation, in regard to physiology and surgery, in a paper in the *Bulletin Général de Thérapeutique* of May 30th, 1878 (summary in the *London Medical Record*, 1878, page 329). In June following, he performed the operation of jejunostomy, with a fatal result at the end of thirty hours, of which he gives an interesting account in the same journal.

Bilroth, as a last resource after the operation of resection of the stomach, reopened the abdomen, and attached the duodenum, with the object of feeding the patient. This answered well, but, owing to exhaustion, the patient sank (*BRITISH MEDICAL JOURNAL*, April 23rd, 1881). Gross, in the last edition of his work on *Surgery*, says: "I am of opinion that gastrectomy for carcinoma will soon fall into desuetude, and that its details need not, therefore, be described. In at least three cases in which it was found impossible, on account of the extent of the disease, to remove the stomach, other procedures were resorted to. Thus, Langenbuch practised duodenostomy, or attached the first portion of the duodenum to the abdominal wall, as in gastrostomy, and opened the gut one week subsequently. The patient, nevertheless, died of inanition ten days later."

THERAPEUTIC MEMORANDA.

CUCAINE IN CANCER.

THE following may be of interest, showing that [the application of] cucaïne is of use in the treatment of at least one form of cancer.

An old farmer came to me lately with an epithelioma on the third finger of the left hand; it had passed into the fungoid stage, and was growing rapidly, being about the size and shape of a cherry, covered with a black leathery crust. As I had before successfully removed these growths by following Dr. Marsden's plan of treatment by arsenical mucilage, I applied it in this case. My patient was a very difficult one to manage; he could neither endure much pain, nor take morphia; so that, after two short applications, very little progress was made, except that the base of the tumour was becoming inflamed, and that I was able to detach the hard crust. Another and final application was necessary. This he dreaded very much; I therefore scraped the tumour down to the raw bleeding surface, and soaked it for fifteen minutes in a 4 per cent. solution of the hydrochlorate of cucaïne, and then applied a thick coating of the arsenic. I was pleased to find that he had actually no pain for six hours, and was able to bear it for six hours more, when he took the lint off, and poulticed; the latter he continued doing for three days, when the tumour came away as a slough, leaving a clean healthy cavity, which is now healing satisfactorily.

This plan of effectually destroying small cancerous tumours is one of great value, and in many respects superior to excision. The only drawback is the excessive and prolonged pain; if this can be diminished by cucaïne, as in the above instance, it will be a very great advantage.

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CHOREA TREATED WITH HYDROBROMIC ACID.

By the kind permission of Dr. Sykes, I have recently made use of this drug in two cases of chorea, in which the spasms were very marked, with considerable success. In the first, a girl ten years of age, the usual treatment with iron and arsenic failed to improve the condition in the slightest. The administration of hydrobromic acid, in thirty-minim doses, three times a day, was at once attended with marked benefit; the motor disturbance was quieted, and she gained flesh, and was soon able to be discharged. Bromide of potassium was tried, in varying doses, without effect. In the second, also a young girl, the disease presented itself in a very acute form. She was throwing herself out of bed constantly, and required restraint. On admission, I kept her completely isolated, and ordered the acid in forty-minim doses; in three days, she was much better, and, at the end of a week, was able to feed herself, which she could not do before. About three weeks afterwards, as the improvement continued, and she was able to get about the ward, I discontinued the acid, and ordered liquor arsenicalis, beginning with a dose of three minims. The nurse soon noticed that the patient was becoming weaker, and one day, in a state of unusual disturbance, she threw herself on to the fire. She was again confined to bed, and became very much agitated. I persevered with the arsenic; but, finding no good resulting, I again resumed the treatment with hydrobromic acid. Within two days, the nurse observed that the patient was much quieter, and she rapidly regained the ground she had lost. She is now almost well.

I think that one may fairly attribute the improvement in both these cases to the use of the drug.

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TOXICOLOGICAL MEMORANDA.

TOXIC EFFECTS OF BELLADONNA.

ON January 26th, I was called to a woman said to be dying, and was informed that, five hours previously, on awaking in the night in pain, she had taken by mistake an ounce of belladonna-liniment instead of her medicine, and in about twenty minutes had passed into a state of insensibility. Copious draughts of mustard and water and salt and water had been administered without provoking vomiting. I found her in a state of coma; the extremities were warm; the abdomen was slightly hard; breathing was regular; pulse 70, fairly good. There was inability to swallow; the pupils were natural, and not sensitive to strong light. Three hours later, her condition was not much changed; the coma was not so complete; there was some struggling; there was incontinence of urine; the pupils were unaltered. I injected one-fourth of a grain of morphia subcutaneously. Eight hours later, coma had passed off, and was succeeded by delirium. Subsultus tendinum was present; she could swallow freely.

The next day, all the symptoms had disappeared excepting some dryness of the mouth and throat. It is noticeable that throughout the pupils were unaffected.

CHARLES WOOD, Dover.

OBSTETRIC MEMORANDA.

PROLAPSUS UTERI AND PREGNANCY.

I was hastily summoned by the midwife, late one evening last month, to attend Mrs. W., a multipara, for a miscarriage. I found the patient, who is a weaver, and had been working up to within an hour of sending for me, in a semi-collapsed condition, and the uterus in a state of extreme prolapse; in fact, procidentia; the os uteri ulcerated, and the skin of both thighs, in contact with the surface of the uterus, excoriated through friction. I found that she had been pregnant four and a half months, and that the uterus had been falling by degrees until the third month; and at this time she would not have sought advice, had it not been for a gush of hæmorrhage while working at her looms. Placing the patient in the horizontal position, with some difficulty I replaced the uterus into the normal position, and plugged. She had not felt the child move for some days, and the waters had broken. I directed small doses of ergot, opium, and iron to be given during the night. She spent a fair night, but had snatches of pain during the next day until 6 p.m., when I was sent for, and found that the plug and a large clot of blood had been driven out. The fœtus between four and five months old, was soon born; it must have been dead some time, being horribly offensive. The placenta soon followed. The parts were then thoroughly washed out with a solution of Condyl's