

TWO CASES OF GASTRO-ENTEROSTOMY FOR PYLORIC CARCINOMA.

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Now that the question of the surgical treatment of pyloric carcinoma is being brought more prominently before the profession in consequence of the improved method of performing operations on the stomach and intestines as introduced by Professor Senn of Milwaukee, and confirmed by myself in this country, I think the following two cases of gastro-enterostomy may be of interest.

CASE 1.—W. V—, aged sixty-one, a Bath-chair man, was admitted into the Cancer Hospital, Brompton, on Feb. 12th, 1890, suffering from carcinoma of the pylorus. Family history: Brother died of abdominal cancer. Previous history: Has always enjoyed good health. For many years was a steward on the "Allan" line. During the summer of 1889 was employed as a waiter, and carried heavy trays up and down stairs, resting the edge of the tray against his abdomen. Present complaint: He first noticed the growth in the beginning of Oct. 1889. It seemed to be situated on the left side, and extended towards the right. Has suffered from vomiting every other day for the last two or three months; sometimes he has vomited twice or three times a day, the vomited matter being dark and frothy. Has lost flesh considerably, and during the last three weeks has lost 12 lb. in weight. State on admission: Stomach much dilated, extending downwards nearly to the pubes. Succussion splash readily obtained. A hard growth is felt in the epigastric region, extending downwards to the umbilicus, and to about an inch on each side. This mass is firmly fixed. A smaller mass, apparently separate from the larger growth, is to be felt just below, and to the right of the ensiform cartilage. The stomach was ordered to be washed out twice a day with a 20 per cent. solution of salicylate of soda and water. This had the effect of speedily reducing the size of the stomach and enabling more exact examination of the growth, which was found to be about the size of a cocoa-nut, measuring five inches and a half across, four inches vertically on the right side, and two inches and a half on the left. The tumour was nodular, and presented a deep notch just above the umbilicus and about the centre of the growth. The disease apparently extended along the anterior wall of the stomach. Tympanitic note over the whole growth excepting to the extreme right. As the man was rapidly losing strength and suffered much pain and distress from the constant vomiting, the operation of gastro-enterostomy was recommended as a palliative measure, it being recognised that it would be impossible to remove the disease. The patient having consented, he was fed by nutritive enemata for the following three or four days, only being allowed essence of beef, milk, &c., by the mouth, and his stomach was washed out twice a day with the salicylate of soda solution. On Feb. 23rd, the morning of the operation, at 8 o'clock, he had 4 oz. of strained beef-tea and 1 oz. of brandy. At 10 o'clock he had his stomach washed out and an enema of beef-tea and brandy. At 1 o'clock his stomach was again washed out and another enema of 3 oz. of strong beef-tea and 2 oz. of brandy given. Just before the operation a hypodermic injection of $\frac{1}{100}$ grain of atropine was given. At 2 o'clock chloroform was administered by Dr. English by Junker's inhaler, and with the assistance of Drs. Purcell, Dove, and O'Reilly I performed the following operation. In consequence of the growth extending so far over to the left of the umbilicus, and being so fixed, I determined to make my incision in the left linea semilunaris; the incision extended from about $1\frac{1}{2}$ in. below the margin of the ribs downwards for about 3 in. All bleeding points being secured, the peritoneum was opened and a coil of small intestine as near as possible to its commencement from the duodenum was drawn out of the wound. Two indiarubber bands about four inches apart were passed through the mesentery, and the portion of bowel to be opened being carefully emptied, the ligatures were lightly fastened round the intestine. A portion of the stomach was now drawn into the wound with some little difficulty, owing to the fixity of the growth and the proximity of the œsophageal connexions. The parts being packed round with sponges, an opening was made into the stomach about an inch in

length, parallel to, and one and a half inches from, the greater curvature. A decalcified bone plate, armed with four silk threads, was passed into the stomach through the opening, and the two lateral threads, with needles attached, were passed through all the coats of the stomach about a third of an inch from its cut edge, the longitudinal threads passing through the opening. These threads were then given to Dr. Dove to take charge of, while an opening was made into the jejunum between the two elastic ligatures, and another bone plate, similarly armed with silk sutures, was passed into it, the lateral threads, having needles attached, being passed through all the coats of the intestine. All bleeding points being secured and ligatured with fine catgut, the two bone plates were approximated and kept firmly in apposition by Dr. Dove, and the corresponding threads of the two plates were tied firmly, the two lower lateral ligatures being tied first, then the end ones, and finally the upper lateral ligature. There was some difficulty owing to the fixity of the stomach in keeping the plates in strict apposition. It was deemed advisable, therefore, to put in about six Czerny-Lembert sutures around the plates. The elastic ligatures were now removed, and the parts, having been thoroughly cleansed, were dropped back into the abdomen, the toilet of the peritoneum was attended to, and the parietal wound closed in the usual manner. The patient stood the operation well, and was returned to bed. He was ordered to have nothing by the mouth excepting a little warm water to rinse his mouth out with. Enemata of zymised beef-tea 3 oz., and brandy 1 oz., were to be given every four hours, and the urine to be drawn if necessary every six hours.—Feb. 24th: Passed a good night. Temperature normal; pulse 84, good; respiration easy; tongue moist and clean; no pain; vomited about 10 oz. of blood-stained fluid. Beef-tea and brandy enemata were continued every four hours. Complains slightly of thirst. To have nothing by mouth.—25th: Passed a fairly good night, with intervals of sleep of about two hours at a time. Temperature normal; pulse 80, rather weak; breathing regular and quiet; tongue moist; no pain or tenderness; abdomen soft and flaccid. Enemata to be continued as before, alternated every four hours with zymised beef suppositories.—26th: Patient somewhat restless. Temperature normal; occasional hiccough; no tympanitis or abdominal tenderness.—27th: Restless night. Pulse feeble and the patient appears very weak. To have a teaspoonful of essence of beef every hour as well as beef-tea and brandy enemata.—28th: Patient gradually got weaker and died during the night, apparently from exhaustion. The abdomen was quite flaccid, and there was no pain or tenderness.

Necropsy, March 2nd.—Emaciation extreme. Abdomen: General old peritonitis over liver, spleen, and cardiac end of stomach; the posterior surface of many coils of intestine adherent to the mass of glands covering the lumbar vertebrae. Liver: Nutmeggy; large secondary deposit. Spleen adherent to diaphragm by old pleuritic bands. Abdominal lymphatics enlarged down to the sacrum. The stomach, intestines, and mass of lumbar lymphatic glands were removed *en masse*. The adhesions between the stomach and jejunum were perfect; the portion of intestine attached to the stomach was discoloured, but showed only very slight signs of recent peritonitis, which was quite localised to half an inch surrounding the puncture. One coil of intestine was adherent to the posterior surface of the wound in the abdominal wall. The stomach and intestines were dilated and distended with gas, and contained some brownish fluid. On opening the stomach, the bone plates were seen nearly digested, hanging by the silk sutures from the opening into the jejunum, which was quite patent and healthy. The portion of intestine which was joined to the stomach was found to be situated about three inches from the commencement of the jejunum.

CASE 2.—A. C—, aged fifty-six, widow, was admitted into the Cancer Hospital, Feb. 14th, 1890, suffering from carcinoma of pylorus. Family history: None. Personal history: Has had four children, last child born twenty-two years ago. Menopause six years since. Patient always been delicate. Has always suffered from indigestion; for many years she had an acute attack every summer, which confined her to bed for about a fortnight. The symptoms were pain in chest and back, vomiting, flatulence, and constipation. She dates her present illness back for six years, and says it commenced as one of her usual attacks of indigestion. It lasted, however, longer, and was more severe. Her doctor told her the liver was congested, and a few

months later she discovered a "lump" in her abdomen. For eight or nine months the patient continued very ill, and was confined to her bed, suffering severe pain, and vomiting several times a day. There was no hæmatemesis. During this time she was frequently seen by the late Dr. Habershon, of Guy's Hospital, who told her the disease was incurable. Under treatment, after a while she began to improve, the tumour disappeared, the pain and vomiting ceased, and she got comparatively well. She remained free from all discomfort for the following five years, but in February, 1889, the old symptoms gradually returned, and the tumour reappeared. The pain was very severe, and was sometimes aggravated and sometimes relieved by taking food. There was occasional vomiting, but food was not returned, she bringing up a "frothy, sour, watery fluid." In May, 1889, she attended at the Cancer Hospital, under the care of my colleague, Dr. Purcell. She continued to get gradually worse until November, growing thinner, and suffering great pain, but able to get about. In November, however, she became considerably worse, and was almost constantly confined to her bed, the pain was most severe, and everything she ate was vomited, usually in a few hours after eating. The tumour gradually increased in size. She was admitted into the hospital under the care of my friend and colleague Dr. Purcell, through whose courtesy and kindness the patient was handed over to my care. State on admission: There is a tumour in the abdomen occupying nearly the whole epigastric region, situated apparently at the pylorus, and extending along the anterior part of the stomach. The tumour is movable, and also moves with respiration. The stomach is enormously dilated, extending as low as the pubes. Succussion splash very distinct. Patient vomits once or twice a day a brownish fermenting fluid, filled with sarcinæ. Patient is very emaciated and weak. Urine healthy. She was ordered to have the stomach washed out twice a day with a solution of salicylate of soda and water, and to take only zymised milk, brandy, and essence of meat. She was also fed by nutritive enemata, port wine, beef-tea, and eggs three times a day. Under this treatment the patient gained strength and the stomach rapidly decreased in size, and vomiting ceased. The tumour was found to be so large that pylorotomy was not to be thought of; but, in consultation with my colleagues, it was decided to recommend gastro-enterostomy, as being likely to prolong life and to allow of the patient taking food by the mouth, and discontinuing the disagreeable process of having her stomach washed out. As the preparation for the operation, and the operation itself, were carried out in identically the same manner as described in Case 1, I need not repeat the details here. I will only point out that in this case I used chromicised catgut ligatures for the bone plates instead of silk. The abdominal incision was made in this case in the left linea semilunaris, as in Case 1. The patient bore the operation well, and passed a good night. She was ordered to have zymised beef-tea and port-wine enemata every six hours, and the urine to be drawn off every six hours. She was fed by the mouth on the second day after the operation with a tablespoonful of zymised milk every hour; this was increased gradually day by day, and on the fourth day she was taking four tablespoonfuls of zymised milk every hour, or forty-eight ounces in the twenty-four hours. The patient was perfectly free from pain, had no nausea, and was rapidly improving. On the fifth day two ounces of zymised beef-tea and calf's-foot jelly were added to the diet. There was not the slightest pain or tenderness in the abdomen, which was perfectly flaccid and soft. The bowels acted regularly, and on the ninth day from the operation she was transferred to the general ward, and allowed to take boiled fish, beef-tea, port-wine, jelly, eggs, &c. The enemata were now quite discontinued. At the end of a month the patient had considerably gained flesh, and was free from all pain and able to take her nourishment well. The tumour was now to be felt drawn up considerably higher between the ensiform cartilage and umbilicus.—July 3rd: The patient, who had increased much in flesh and was perfectly free from pain and able to take ordinary diet, left the hospital on June 27th. The growth had not increased in size, and there was no pain or tenderness on pressure.

Remarks.—These operations can of course be only looked upon as palliative, and at present it is questionable whether life is prolonged, as a sufficient number of cases have not been yet reported. That the patients are considerably relieved there can be no doubt; the distressing vomiting and constant pain disappear immediately, and

the necessity for the constant passing of the œsophagal tube to wash out the stomach is avoided, so that, at any rate, the last months of life are passed in comparative comfort. In the two cases above narrated the disease was very advanced, and any hope of performing the more radical operation of "pylorotomy" negatived. The question naturally arises in cases of carcinoma of the pylorus unsuitable for excision, whether gastro-enterostomy is a desirable operation? Is life prolonged, and is suffering relieved? The point as to whether life is prolonged cannot at present be answered with certainty; but that the patients are relieved there can be no doubt. The next question which arises refers to the immediate risk of the operation. This appears not to be great when it is performed by Senn's method of approximation discs. I have received accounts now of seven cases operated on in this country by this method, not one of which died from the operation. It is true that two of these cases died—one on the sixth and the other on the seventh day,—but both of these succumbed to exhaustion, and I firmly believe they would have recovered had they been fed earlier, as the post-mortem examination proved that so far as the operation was concerned there was perfect union between the stomach and intestine in both cases. There is one point in the performance of the operation which I think is worthy of notice—viz., the importance of uniting the jejunum to the posterior wall of the stomach instead of the anterior. It is, I think, as easy to perform, and must avoid all risk of kinking of the intestine. The method by which I propose to perform it is to draw the great omentum and transverse colon out of the wound, and turn it upon a towel wrung out of warm carbolic water, and tear through the transverse meso-colon, and stitch it by means of a few catgut sutures to the opening formed in the stomach. The posterior wall of the stomach immediately comes into view, and can be readily opened, and adjusts itself to the jejunum or third part of the duodenum quite easily. It is very much easier to keep the plates in apposition by this method than by twisting a loop of small intestine over the colon to the anterior wall of the stomach. I should here like to point out to physicians and practitioners the importance of early diagnosis, as it is undoubtedly only by early excision of the carcinomatous pylorus that a radical cure can be effected. In performing pylorotomy I am strongly of opinion that the high mortality which has hitherto attended this operation is due to two factors—first, the shortness of the portion of duodenum covered with peritoneum making it very difficult to unite it firmly to the cut end of the stomach; and, second, the length of time taken in performing the operation by the method which has been practised up to the present. To avoid this I propose in future to adopt the plan I advocated some time ago of doing pylorotomy and gastro-enterostomy at the same time by invaginating the divided end of the duodenum into itself, and fixing it in position, and by inverting the cut end of the stomach and uniting this by Lembert sutures, and finally by attaching the jejunum to the posterior wall of the stomach as in an ordinary case of gastro-enterostomy. In all cases of doubtful diagnosis I strongly advocate early abdominal section.

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THE PATHOLOGY OF HAY FEVER.

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(Concluded from page 13.)

IF pollen is largely concerned in the origin of the form of hay fever previously described, it has but a subordinate share in the production of the one which Phœbus calls "the chest group" and Blackley "the asthmatic variety." A glance at the clinical phenomena of those several forms will at once show the essential differences between them, and lead to the conviction that, notwithstanding their similarity in many points, they are not and cannot be the mere modified results of the self-same cause. As regards the pollen, or rather the dust catarrh, it has been asserted that a person endowed with the peculiar disposition need only enter a room in which fresh grasses or flowers are kept, and forthwith comes the burst of sneezing. So rapid is