CLINICAL LECTURE ON SOME EXCEPTIONAL CASES OF GASTRIC SURGERY.

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GENTLEMEN,—There has been of late in my wards a series, especially among the females, of cases suffering from the effects of chronic gastric ulceration, most of whom have been passed on to me by my medical colleagues as being no longer amenable to medical treatment. Some of these cases have presented exceptional features, which I will make the subject of to-day's lecture.

Pyloric Obstruction caused by an Impacted Fishbone.

A married woman, aged 48, was transferred to me by Dr. Murrell with the following history. She had been in very good health until ten months ago, when suddenly one day, whilst walking in the street, she was seized with a violent pain in the epigastrium which made her feel as though she were going to burst. The abdomen swelled up, but she did not pass flatus; for seven weeks she was in bed on a fluid diet, with poultices on the abdomen. Then she got up and tried to take ordinary food, but it caused a choking sensation, with an aching pain in the epigastrium. On several occasions the attacks of pain seized her as at the first, with swelling of the abdomen, constipation, and scantiness of urine. A fixed lump appeared in the epigastrium, and the pain became worse whilst moving about and caused her to suffer from dyspnoea.

In the medical ward the patient could only take fluids, and did not improve. It was decided therefore to explore the painful lump in the epigastrium; and the case is an admirable instance of the value of surgical exploration in obscure and stationary cases. The pyloric third of the stomach was found adherent to the back of the abdominal wall, being pinned there by a fishbone $2\frac{1}{2}$ inches in length, and of the size of a stout needle. One end was fixed in the left rectus muscle, and the other end of the fishbone projected into the pyloric third of the cavity of the stomach, the middle of the bone being surrounded by a small thick-walled abscess cavity. The fishbone, after being swallowed, having arrived at the pylorus, instead of passing through end on, had become wedged athwart the orifice and subsequently, by the peristaltic movements of the stomach, one end had been driven through the stomach into the abdominal wall. This accounts for the sudden attack, the immediate result of which was a reflex inhibition of intestinal peristalsis, causing the abdomen to become swollen by tympanites, and inducing constipation and scanty flow of urine. At the same time there was partial obstruction to the escape of food from the stomach, hence the subsequent difficulties in digestion. The patient could never recall having swallowed the bone. The fishbone was extracted, and the adhesions of the stomach to the abdominal wall divided. The portion of the anterior wall of the stomach, which had formed a thickened mass about an inch and a half in diameter around the bone, was excised, then the gap was closed by a double row of seromuscular sutures. The abdominal wound healed at once; a sinus leading down to the abscess cavity closed after a short delay, and she was seen some time after her discharge from the hospital in good health.

Two Cases of Severe Recurrent Hæmatemesis: Gastrorrhagia.

The treatment of severe hæmatemesis by a surgical operation is at present somewhat experimental. It appears very unlikely that any attempt to arrest the bleeding whilst still in progress can be successful on account of the uncertainty as to the whereabouts of the bleeding point, which must involve a more or less prolonged search in a very weak patient. Nor, for the same reason, is it feasible to operate soon after the spontaneous arrest of the hæmorrhage whilst the patient is still acutely anæmic. If the patient does not die at once from the gastric hæmorrhage it will most probably cease of its own accord, and not recur for some weeks. But when a patient, after recovering from the

acute anæmia and having again a more or less normal pulse tension, is attacked a second or third time by bleeding from the stomach, the prognosis becomes more grave, and death will sooner or later take place, either from anæmia and exhaustion, or from sudden ulceration into one of the larger arteries.

The dread of another attack hangs over the patient's head just as she is beginning to recover strength, and it is at this juncture that surgical procedures offer some prospect of being successful. There is in the first place the indirect methods of gastro-jejunostomy or pyloroplasty which, by getting rid of the "gastric stasis," the delayed digestion and decomposition of the food, allow the stomach to empty itself rapidly, so that the ulcer from which comes the hæmorrhage tends to heal. The direct method of securing the bleeding point or the blood vessel supplying the ulcer is dependent for success upon finding the ulcer, and may involve a prolonged examination of the inside of the stomach. This has been done by passing a finger behind the organ and pushing the posterior wall forwards into an opening made on the anterior aspect. Successful cases have been met with, as by Professor Kocher, who found a large ulcer in which a fruit stone was so firmly lodged that the ulcer could not possibly have healed unless it had been exposed and the foreign body removed.

Excision of the chronic ulcer—this can only be accomplished when it is single and circumscribed, situated on the anterior wall at a distance from the pyloric or cardiac orifice. The ligation of the arteries and veins connected with an ulcer seems to be a hopeful measure, but it was not ultimately successful in the case I am about to mention. Any attempt to ligature the gastro-duodenal artery or one of its larger branches would certainly entail gangrene of the area supplied by the ligatured vessel, owing to its being an end artery, without free anastomosis with the neighbouring blood supply. Amongst the cases I have operated upon hæmorrhage has frequently been an incident, adding to the exhaustion of the patient. But in two cases the only sign of the chronic ulceration was recurrent gastric hæmorrhage rendering them acutely anæmic.

Recurrent Gastric Hæmorrhage Treated by Pyloroplasty.

An unmarried woman, aged 44, had been rendered acutely anæmic by severe attacks of hæmatemesis, which had recurred with increased frequency for twenty years, and until she could no longer follow her occupation. Nothing could be made out on clinical examination except a slight dilatation of the stomach. She was treated in bed for a month, until she had become less anæmic. At the operation the stomach was found to be dilated with large and tortuous vessels; whilst there was some pyloric constriction. No ulceration nor scarring could be discovered, and it was supposed that the hæmorrhage resulted from venous congestion following upon the dilatation. Hence pyloroplasty was done, and you have seen the patient, more than a year and a-half after the operation, stout and in good health and following her occupation without any return of hæmatemesis or other gastric disturbance.

Severe Recurrent Hæmatemesis, Treated at First by Invagination of the Ulcer, after Ligation of the Artery and Vein Connected with it, and later by Gastro-jejunostomy.

I was asked by Dr. McDonald, of South Lambeth, to see a woman, aged 37, who, five weeks after the birth of her child, had had a recurrence of severe hæmatemesis, so as to render her unconscious and pulseless. Dating from ten years before, and at intervals of about two years, she had these severe attacks of hæmatemesis. They had come on, without warning, with a sense of rapid filling of the stomach by a warm fluid, and then blood had flowed from the mouth until she fainted. When I first saw her she was acutely anæmic, only partially conscious, and the pulse scarcely perceptible at the wrist. She was kept in the ward for five weeks before operating, during which she recovered a good deal from the anæmia. On exploration an ulcer was found at the junction of the middle and pyloric third of the stomach, on the anterior wall, about $1\frac{1}{2}$ inch from the greater curvature. To its floor a considerable artery passed, attended by a corresponding vein. I therefore ligatured these vessels close to their junction with the main vessels running along the greater curvature, and invaginated

the floor of the ulcer by a double row of sero-muscular sutures. No other disease was discovered, and for a time the operation seemed a success. A year afterwards she came to show herself in good health and strength, with a marked colour. A week later, however, she was brought back to the hospital, again in acute anæmia following hæmatemesis. After a month of general treatment I reopened the abdomen, to find an extensive ulceration involving the pyloric third of the stomach, and thereupon performed gastro-jejunostomy. Since then nearly a year has elapsed, she is here in good health, and with a fresh colour, but obviously a long time must be allowed before it can be said that she is cured. Evidently the ligature of its vessels and the invagination of the ulcer did not arrest the ulcerating process.

Extensive Ulceration and Sloughing of the Inner Wall of the Stomach, due to Hydrochloric Acid Poisoning, followed by Obliteration of the Cavity, treated by Gastro-jejunostomy.

Last March there was in the ward a difficult case successfully relieved by gastro-jejunostomy. A cabdriver, aged 34, was sent into the hospital by Dr. Bourns, with the history that in the previous November, whilst in drink, he had swallowed 2 ounces of spirits of salt (commercial hydrochloric acid). He was admitted into the medical ward of another hospital for three weeks until he could swallow and retain liquid food. A week after leaving the hospital he could no longer swallow liquids, and went back to the same hospital, where he was admitted to a surgical ward and œsophageal bougies passed. When he could swallow and retain liquids again, he discharged himself. He could for a time take even solid food, then pain and vomiting began to come on after meals. When first seen by me he could swallow well, and the largest-sized œsophageal bougie passed without difficulty; but he could not retain food, vomiting coming on a quarter of an hour to three hours after meals. For the last three days before operation he subsisted entirely on rectal feeding, as nothing was retained by the stomach. At the operation a very small stomach was exposed, with a thick, rigid, puckered wall, but without external adhesions. On proceeding to do gastro-jejunostomy, no cavity of the stomach was at first reached until the incision was extended upwards towards the cardiac orifice, through 1 inch of indurated inflammatory tissue. The small cavity remaining was lined by ulceration and sloughs of mucous membrane were extracted; these were not foul, nor was there any food *débris*. Fortunately the jejunum was free and healthy, and hence I was able to complete the gastro-jejunostomy, and the patient made a good recovery. In four weeks he could take ordinary diet, including mutton chops, felt hungry, and was putting on flesh. After leaving the hospital he continued well, without gastric symptoms, but seemed to be indulging freely in alcohol.

The main success of gastro-jejunostomy clearly lies in converting the stomach into a continuation, as it were, of the œsophagus, so that all the food passes through without delay or decomposition to be digested entirely in the intestines.

Gastro-duodenostomy.

In one case transferred to me by Dr. Murrell I found it impossible to carry out either pyloroplasty or gastro-jejunostomy. A woman, aged 61, dated her gastric troubles from an attack six years before, which had recurred at intervals with hæmatemesis. During the previous four months there had been frequent attacks of vomiting, brown-black frothy material being brought up. She had had constipation throughout, and had recently wasted. On examination, only dilatation of the stomach could be made out. As she made no improvement under medical treatment, I explored and found the pylorus buried in thick adhesions and fixed under the liver, without any signs of tumour formation. The anterior wall of the cardiac half of the stomach was firmly adherent to the abdominal wall, in which also the transverse colon was involved. There remained free only the junction of the pyloric with the middle third of the stomach and the adjacent descending duodenum. I therefore adopted the operation of gastro-duodenostomy introduced by Professor Mikulicz. It would have been impossible, in the weak state of the patient, to have divided the adhesions, which in any case would have quickly re-formed. The operation was easily accomplished by drawing the duodenum forwards in front of the neighbouring wall of

the stomach. The patient left the hospital five weeks later taking solid food and gaining weight.

Some Points concerning the Operations.

In conclusion, I will add some remarks which apply generally to these operations. In the first place, the patients have been kept on nutrient enemata alone for a day before the operation, so as to allow of the interior of the stomach becoming aseptic by the agency of the hydrochloric acid of the gastric juice. I do not find it necessary to wash out the stomach. Any danger which may exist of setting up hæmorrhage or perforation is thereby avoided. After the operation rectal feeding has been continued until the patients can keep down water, when food is given by the mouth in small quantities and at frequent intervals. Meanwhile hypodermic injections of morphine and atropine are given every three hours or so to prevent vomiting. The patients should be propped up in bed, not kept recumbent, as is customary in abdominal cases, and a movement of the bowel should be obtained by calomel on the second day.

I use for all operations a fine silk suture on a small round sewing needle. Two rows of continuous sutures are inserted, one deep, taking in all three coats, or avoiding the mucous membrane, and the superficial sero-muscular, burying in the deep row. All operations on the stomach and intestines can be done with this suture, and any student who desires to learn these operations should, besides watching them in the operating theatre, practise on the fresh stomach and intestines in the *post-mortem* room. The use of a special apparatus, such as Murphy's button, is a question upon which surgeons are divided. The merit of Murphy's button for gastro-jejunostomy is the speed with which it can be inserted. A great deal of the time entailed by gastro-jejunostomy is taken up by suitably anæsthetising the patient, examining the stomach as to the nature, situation, and extent of the disease, and the approximating of the loop of the jejunum to the stomach. The more the suture is used the more speedily is the anastomosis performed. There are cases where it is difficult to fit Murphy's button in position; in the mineral acid poisoning case just mentioned, no button could possibly have been fixed in the indurated thickened stomach wall. Besides, many cases are fatal from leakage beside the button into the peritoneal cavity. I have not seen the continuous suture fail or be followed by leakage. I have successfully performed gastro-jejunostomy where there was already general peritonitis following perforation with a pint of the stomach contents in the pelvis. A pyloric ulcer had perforated in three places, and could only be treated by filling the wound with gauze and draining the pelvis, yet the patient recovered, relieved from the previously existing pyloric obstruction. Moreover, there is a tendency for Murphy's button to fall back into the stomach, from which it has to be removed by a second operation.

The main lesson I would impress upon you by means of this lecture is the importance of a surgical exploration in all obscure cases which are not quickly relieved by medical treatment, or in which the symptoms tend to recur. Not only is this important for cases where chronic gastric ulceration is present, but, more important still, it is the only way of making such a sufficiently early diagnosis of cancer as to offer any chance to the patient of being cured.

KENT COUNTY OPHTHALMIC HOSPITAL, MAIDSTONE.—At a meeting of the Board of Management of this institution, held in September last, the resignation of Dr. Adams, of Maidstone, was received, and with great regret accepted. A resolution was passed expressing, on behalf of the governors and subscribers, "their deep sense of indebtedness to Dr. Adams, and their appreciation of the assiduous and gratuitous services rendered to them and to the inhabitants of the County of Kent, for the long period of more than 37 years, during which time he has been the Surgeon to the hospital, and upon whom has devolved, to so large an extent, the conduct of the institution, and the benefits conferred upon the many thousands who have availed themselves of this free institution." At the following meeting of the Board Mr. Ernest H. Cartwright, B.Ch., M.D.Oxon., who has up to this time acted as Assistant Honorary Surgeon to the hospital, was appointed Surgeon in succession to Dr. Adams.