A CASE OF REPEATED ABDOMINAL SECTION FOR PERFORATION OF GASTRIC ULCERS.

By ARCHIBALD CUFF, B.A., M.B., B.C., F.R.C.S.,
SURGEON, ROYAL INFIRMARY, SHEFFIELD.

OPERATION in cases of perforation of gastric ulcer is nowadays so common, and is usually attended with such successful results, that only the unusual sequence of events in the following case makes me think it of sufficient interest to place on record.

R. M., aged 27, was admitted into hospital on April 24th, 1906, with the following history: Since the age of 10 he had had almost constant trouble with his stomach, severe attacks of pain in the epigastrium coming on, as a rule, two to four hours after every meal, and lasting until the next. After taking food he always had total relief from pain for at least an hour. The kind of food taken did not appear to influence the amount of pain, but the patient noticed that after pork pie he always had a much longer period of relief than after other kinds of food. The patient had practically no vomiting and never any haematemesis. Pressure over the stomach did not increase or decrease the pain. At times there would be freedom from attacks for about a month, and then they would return and last two or three months. During freedom from pain he felt perfectly well and had a good appetite, though he had a dislike for butter and all greasy substances, and did not eat much butchers' meat. As the patient got older the attacks of pain remained about the same, until five years ago, when they increased in severity. About the end of January, 1902, the pains in the epigastrium became very bad, but seemed to be relieved by vomiting, which was induced by taking Seidlitz powders.

On the night of February 10th, 1902, he was awakened by a sharp stabbing pain in the epigastrium, different to anything he had had before. His medical attendant, Dr. W. S. Kerr, saw him and diagnosed perforation of a gastric ulcer, and had him transferred to the Royal Infirmary, where my colleague, Mr. Arthur Connell, performed laparotomy. At the operation an ulcer which had perforated was found at the upper and posterior surface of the first part of the duodenum, there was also pyloric obstruction with considerable dilatation of the stomach and gastroptosis. The ulcer was sutured, the peritoneal cavity cleansed, and the wound closed. The patient made an excellent recovery, and six weeks later Mr. Connell performed an anterior gastro-enterostomy. After the latter operation there was some suppuration about the wound, but the patient left the hospital perfectly well after a total stay of ten weeks.

For seven months he had perfect freedom from pain or discomfort, but about Christmas he began again to have attacks of discomfort and a sense of fullness in the epigastrium. Attacks of this sort came on about every six months, and would last one or two weeks, being relieved by vomiting, which he induced by tickling the fauces. With these attacks of discomfort there was always a pain in the left hypochondrium; in fact, this pain always seemed to be the precursor of any stomach trouble.

At Christmas, 1904, he had a sudden attack of severe pain, at first all over the abdomen, later becoming more localized to the left side, and worse on inspiration. There was no vomiting. The pain eased somewhat on his going to bed, but lasted for two weeks. He was on light diet at the time, but food did not appear to influence the pain. Occasional attacks of pain occurred after this until Easter, 1905. From then he ceased to eat butchers' meat, living almost entirely on a vegetable diet. The next twelve months he describes as the best he remembers, as he was almost free from pain and gained in weight.

On April 24th, 1906, the patient was again seized with extreme pain in the epigastrium while writing at his desk; he did not vomit but sweated profusely. After being taken home in a cab, and put to bed, the pain being intense, Dr. Kerr saw him, and diagnosing a perforated gastric ulcer, again sent him to the infirmary, where he was admitted under my care. I saw the man about six hours after the onset of the pain. He lay in bed with his legs drawn up, and with a slight expression of pain on his face, but not a typical abdominal facies. He complained of moderately severe abdominal pain, most acute under the lower two or three ribs on the left side; the pain was much less than it had been, but he had had morphine administered before admission. The abdomen was not distended. The abdominal muscles were rigid, especially the left rectus. There was slight movement of the abdominal wall on respiration. Palpation was painful; the liver dullness was not diminished, and the resonance over the left hypochondrium was more tympanitic than usual. The tongue was dry, the pulse 80, and the temperature 100° F. There had been no vomiting.

On a consideration of the history of the case, the mode of onset, the physical signs present, paying due regard to the fact that the patient had had morphine, I felt reasonably

certain that the diagnosis of perforated gastric ulcer was correct, and decided to operate.

An incision into the abdomen, made somewhat to the left side of the middle line, revealed considerable adhesions about the anterior surface of the stomach, especially to the right and about the gastro-enterostomy. The cardia of the stomach was comparatively free from adhesions; here bubbles of gas and the welling up of turbid fluid led to the discovery of a perforated ulcer on the extreme left limit of the stomach about the size of sixpence. Although the general peritoneal cavity was perfectly open to infection at this spot, the area of this infection was small, principally between the stomach and spleen and slightly towards the region of the kidney. The stomach, as far as could be made out, was not very much dilated; the condition of the pylorus could not be determined. The gastro-enterostomy appeared to be patent, but whether it could be active with such extensive adhesions around it was open to doubt. The perforation was closed, the infected area cleansed with sponges, and the wound closed in the usual manner. For the first twenty-four hours the patient vomited very often; as he had vomited for many days after his previous operations and only putting him in the upright position checked it, this was done now with equal success. After this he made an uninterrupted recovery and left hospital on the twentieth day. When seen some little time afterwards he was in fair health, but still at times had discomfort after meals.

There are several points of interest about this case. In the first place, it must rarely happen that a person is called upon to twice undergo laparotomy for the perforation of two totally distinct ulcers. I have been unable to find mention of any similar experience in any of the literature bearing on the subject at my command (Nothnagel, Mayo Robson, Treves, von Bergmann). The early age at which this unfortunate man commenced to suffer from symptoms referable to serious trouble in his stomach is again of interest. For thirteen years there had been symptoms pointing to mischief in the neighbourhood of the pylorus, or more probably of the duodenum. The onset of the pain a few hours after the taking of food, when, the digestion of the meal nearing completion, the beginning relaxation of the pyloric sphincter allows the contents of the stomach to flow into the duodenum, and hence over any hyperaesthetic spot in that organ, is very suggestive of duodenal ulcer. The interesting fact related by the patient that indigestible articles of food like pork pie delayed the onset of the pain is in strict accordance with this theory, pork requiring four or five hours for its digestion, while mutton only requires two or three hours. This fact of the possibility of retarding the onset of the pain in cases of duodenal ulcer by the administration of indigestible food, or by eating during the digestion of a previous meal, has been noted clinically by Chvostek.¹ The same thing is borne out experimentally by Cannon,² who has shown in the course of his investigations on the movements of the stomach during digestion, by means of the *x* rays, in cats, that if towards the completion of the digestion of a meal (the movement of which, owing to its admixture with a bismuth salt, was visible on the screen) a hard tablet or button made principally of bismuth was administered, its impact on the pyloric orifice immediately caused the sphincter to contract, and stopped the onward flow of chyme from the stomach to the duodenum for some little time.

The dilatation of the stomach to which many of his later symptoms were due may have been produced by actual ulceration of the pylorus, or may have been produced by the spasmodic closure of the sphincter induced by the irritation of the neighbouring ulcer in the duodenum.

The condition of the gastro-enterostomy in this patient was such that no deduction of any value as to the influence of this operation either in preventing the recurrence of ulcers or on their healing or progress could be made. That the drainage of the stomach by its means might still be effectual seemed to be shown by the state of contraction of the stomach found at the second operation compared to that present in 1902.

While ulcer of the cardiac end of the stomach is very uncommon, the presence of the referred pain over the lower ribs in the epigastric region—that is, along the sixth, seventh, and eighth left intercostal nerves—is in accordance with our knowledge that the cardia receives its innervation from twigs from those same dorsal nerves—the sixth, seventh, and eighth nerves.

REFERENCES.

- ¹ Vienna Medical Year Book, 1883. ² Amer. Journ. Physiol. vol. i, 1898.