PERFORATING GASTRIC ULCER SUCCESSFULLY TREATED BY OPERATION.

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CASE.—The patient was a widow, aged thirty-five. Twenty years ago she had suffered for two years from persistent pain in the gastric region, which was aggravated by taking food. This disappeared, but for eighteen years she had been subject to attacks of pain of a neuralgic character, which occupied various situations—head, face, side, &c.—came on at regular intervals, and were relieved by quinine. About the beginning of July, 1897, an attack of apparently the usual character came on. It was, however, noticed by Dr. O'Hara that the paroxysms had a distinct relation to the times of taking food, occurring about three hours after meals. Vomiting after food took place twice. Under dietetic treatment the symptoms were becoming less acute. when, on July 20th, 1897, she took a small quantity of porridge and milk for supper at 9 p.m., and at about 10 30 retired to bed, and fell asleep. Before 11 she was awakened by a sharp pain in the abdomen, which she recognised as more severe than any she had previously felt. It increased in intensity when she got out of bed. Dr. O'Hara saw her at 1 30 a.m. She had then great pain in the left of the epigastric region, and had vomited twice since the seizure. There was some rigidity of the abdominal muscles, and no alteration in normal liver dulness. The pulse was 80, and the temperature normal. She got one-sixth of a grain of morphia hypodermically, and $\frac{3}{4}$ iv. of brandy by the rectum. At 1 30 p.m. on July 21st she was complaining of some pain in the epigastric region, and of inability to lie down, preferring a half-sitting posture in bed. Her pulse was 104, her temperature 101, and her abdomen was considerably distended and tympanitic. As the pulse and temperature had been getting worse hour by hour, it was decided to operate at once.

Chloroform was given by Dr. Mullan, and I proceeded to open

the abdomen, Drs. O'Hara and Currie assisting. A median incision in the epigastrium allowed some gas to escape, and showed the front of the stomach to be covered with a milky fluid, which welled out of the wound, and was sponged away to the amount of two ounces. Many patches of lymph were seen towards the upper border of the stomach and across the front of it towards the left. The thickness of the abdominal walls rendered a longer incision necessary, and it was accordingly extended from one and a half inches below the ensiform process to an inch below the navel. Careful inspection then detected greenish fluid welling out of the stomach near the lesser curvature and about an inch from the pylorus, the perforation being as large as a three-penny piece. Below and on the left the aperture was bounded by apparently normal stomach wall, and above and on the right by a mass of cicatricial tissue as thick as the forefinger. The opening was plugged with gauze, and the stomach area was packed round with towels which had been recently boiled. The edges of the opening were trimmed with scissors, the cicatricial tissue being freely removed, except above, where cutting it away caused free bleeding. The raw edges were brought together by a continuous suture of fine silk, including the whole thickness of the stomach wall. Over this about a dozen interrupted Lembert sutures were placed, and over all a piece of small omentum was tacked down by a continuous suture. The abdomen was cleaned by gauze sponges. A gauze drain was inserted in the upper angle of the wound, reaching well over towards the spleen, where the gastric contents had spread most freely. The lower three-fourths of the wound was closed by interrupted silkworm-gut sutures. Owing to the distension great difficulty was experienced in getting the abdominal walls to meet over the bowels. Iodoform dressings were applied.

After Treatment.—A copious enema given after operation proved very effective in relieving thirst. Nutrition was kept up for five days by enemata. Then feeding by mouth was cautiously commenced, water being given first, then animal extracts, and then milk. The gauze drain was removed on the fifth day, and the stitches on the fourteenth day. The track in which the gauze drain lay healed by granulation, the rest of the wound by immediate union. On the third day the pulse slowed down remarkably, and remained for twelve hours under sixty in the minute.

Remarks.—The abdomen was not flushed out because we thought the stomach contents had not spread far beyond the gastric region, and we feared that flushing might only disseminate them still further. Therefore sponging and drainage were relied on. Previous to closing the abdomen the cavity of the small sac was inspected through an opening torn in the omentum near the lower border of the stomach. It was found to be uncontaminated, showing that the posterior wall of the stomach was intact. The progress after operation was in every way excellent. Both pulse and temperature at once fell, and remained down throughout the period of convalescence. The patient is now well, and has been free from pain since the operation. Much credit is due to Dr. O'Hara for his promptness in recognising the nature of the illness and in at once advising operation.

DR. CRAIG thought Dr. Campbell very fortunate in having secured such a case, as all cases were not suitable for operation. He thought the operation could be undertaken only when the ulcer was still acute, was situated on the anterior wall of stomach, and where firm adhesions had not already formed. When on the posterior wall adhesions would probably have formed, and the patient die from hæmorrhage, localised abscess, or other causes; also, an ulcer on the anterior wall was easily reached. The result in this case had removed from his mind the great gravity of recommending laparotomy in cases of perforating gastric ulcer. In this case the position of the ulcer exactly coincided with where an ulcer most amenable to treatment should be. It was evidently a recent or acute ulcer, and the existing cicatricial tissue evidently the result of the old ulceration which had existed twenty years before, or at later periods.

MR. MYLES related the case of a servant maid suddenly taken ill. Perforation was easily diagnosed, and patient was exceedingly collapsed. Consent to be operated on was not obtained till the fourth day, when an immense collection of pus was distinguished on opening abdomen; the surface of stomach was covered with lymph, and adhesions had formed everywhere. It was impossible

to determine the actual point of puncture. The abscess cavity was drained. Death followed. In a second case, on which he operated six hours after perforation, the abdomen was found full of blood. Patient had had symptoms of collapse, constant pain, and vomiting blood. The perforation was easily found and sutured, but, unfortunately, the girl died after leaving theatre. In a third case perforation was found on posterior wall. It was impossible to drain the cavity owing to the situation. Death followed some weeks after operation. The operation of suturing a perforating ulcer on anterior wall of stomach was not, in his opinion, very difficult, provided proper access to stomach could be obtained. He thought that in future he would enlarge the ordinary vertical incision by an oblique incision, as the increased facility of operation would more than counterbalance the disadvantages of liability to ventral hernia and greater shock. He saw the case of a child where perforating gastric ulcer was diagnosed. Operation was not allowed, and the boy was perfectly well in two days. The diagnosis was, therefore, not so easy.

MR. FRAZER gave a case where perforation occurred at back of upper curvature. Death in ten days. Position of ulcer found at *post-mortem*. He did not see how it could have been easily reached by operation. He gave two other cases which recovered under medical treatment, but death took place at distant intervals by both ulcerations giving way. In one of these cases the patient, a woman, ate a hearty meal, including peas. Symptoms of perforation were present, and after death some peas were found in her pelvis. He had seen a case of typhoid fever where perforation undoubtedly occurred, but recovery took place.

MR. R. G. PATTESON said that in the majority of these cases the patient was not seen in the acute stage, or when perforation was recent. The patients were generally seen when several attacks of inflammation had caused adhesions, abscesses had formed outside the stomach, and a fatal result was brought about by perforation of the sac of the secondary abscess cavity. He gave a case where such had occurred. Whether the ulcer was acute or chronic was important. In cases which he had examined *post mortem* he found that in the area surrounding the ulcer there was a considerable amount of induration, where the gastric wall was enormously thickened, where any attempt at inversion of the wall to close the ulcer, or suture of any kind, would be difficult without invaginating a considerable area of stomach wall. If one had to excise a

large indurated area probably cicatricial tissue would not unite in the same way as healthy mucous membrane. Every moment of delay added to the gravity of the operation. Perforations due to perforative peritonitis in typhoid fever could not be classed with such cases, as the ulceration is generally multiple, and although one perforation might be closed by operation, there was no guarantee that there were not other points about to rupture. It was much more difficult to close the stomach wall in a state of induration due to chronic inflammation than to close the intestinal wall.

MR. HENRY GRAY CROLY said that such a case as Mr. Campbell's some years ago would have been placed under the physician and treated expectantly. The case showed that the sooner laparotomy is done the better.

DR. A. J. SMITH had seen two cases of perforating gastric ulcer. The first case, that of a young girl, had been on dietetic treatment in a hospital. One day she was seized with a sudden pain in abdomen while in a tram, and was brought to St. Vincent's Hospital, and placed under care of Mr. Tobin. When admitted she was partly collapsed, and had a peculiar cyanosed condition of face, collapsed pulse, and slow respiration. On palpation a dull area over anterior surface of stomach was found. The abdomen was opened the following morning, and milk and bread came from it. Adhesions were present. Plugged with iodoform gauze, and patient recovered. The second case was that of a woman brought to hospital with sudden pain in abdomen and collapse. Cyanosis present, but no dull area detected in epigastrium. There was absence of liver dulness. Death ensued. *Post-mortem* showed abdominal cavity full of a hearty meal. He could hardly conceive how one could treat a case when the stomach was full and the contents spill over the abdominal cavity. He believed that when rupture occurred on anterior wall, and when stomach was empty, surgical treatment was of avail, but not otherwise.

MR. LENTAIGNE asked if there was any modification of liver dulness in Mr. Campbell's case? He had two cases recently under his care, in both of which there was absence of liver dulness. In the first case operation was not allowed, and patient died in two or three days. *Post-mortem* showed a gastric ulcer on anterior wall of stomach. The symptoms of the second case were similar, and at request of patient, though against wishes of parents, the abdomen was opened. However, the perforation could not be

found, and was not certainly on anterior wall. He introduced a gauze drain, and endeavoured to give relief. Patient died in a week. *Post-mortem* showed a perforation on posterior wall, and quite inaccessible.

MR. JOHN CAMPBELL, in reply, said that although the anterior wall is by far the most favourable situation, still it was possible to deal successfully with a rupture on posterior wall at times, as is proved by a late successful case under Dr. Walton Brown, of Belfast. Regarding likelihood of success, his own case was fortunate in respect to the amount of extravasation, which, he thought, had more to do with success than anything else. The more extravasation, the less chance of success. Probably it was not worth while to operate later than twenty-four hours after perforation. With reference to flushing *versus* sponging the abdominal cavity, he was in favour of the latter, as it was easier for the patient, and flushing often diluted and disseminated the material through the cavity. He was against operating in perforation from typhoid ulcers, as the patient was not able to bear a laparotomy. In answer to Dr. Lentaigue, he said that liver dulness was present three hours after perforation, but had disappeared fourteen hours after.