

## SOME CASES OF PERFORATING GASTRIC ULCER.

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[Read in the Section of Surgery, March 3, 1899.]

In no branch of abdominal surgery has the departure from old traditions been more pronounced, and in none have the successes been more brilliant than in that to which I shall refer to-night.

So many points of interest spring before one's mind in connection with this subject that there is a difficulty in making a selection, without omitting what may be vitally important. I will first refer briefly to the cases that have come under my notice, and then discuss, necessarily in a very cursory manner, a few of the more important points that are still controversial :—

Some months ago I was asked by my friends, Sir Francis Cruise and Dr. Moran, to see with them a gentleman with the following history :—

Early on that day, when at his office, he had been seized with violent abdominal pain and vomiting. Dr. Moran saw him, and on examination found him suffering from an umbilical hernia—tense, hard and tender. This hernia Dr. Moran reduced, and the patient expressed himself as feeling somewhat relieved. He was then put in a cab and driven home.

Some little time later on the same day the vomiting recommenced, and the patient complained of unendurable pain above the umbilicus in the middle line of abdomen.

Sir Francis Cruise, who had previously treated him for gouty affections, was called into consultation, and during his examination the patient began to vomit black, tarry matter, evidently

blood acted on by the gastric juice. At this stage it was resolved surgical advice should be had, and I was sent for, as detailed above.

I saw the patient at 8 p.m. He was a thin, spare man of ascetic type, aged seventy, with an expression of great suffering in his features. His legs were drawn up; his abdomen, slightly distended, was as rigid as a board; his breathing shallow and hurried. The slightest touch on the abdomen caused great suffering, and on percussion the area of liver dulness was replaced by one of resonance.

At the umbilicus was still felt a decided fulness, as if the hernia had perhaps partially recurred. He had all the aspect of a man rapidly sinking in a state of collapse, and it was evident that if any surgical measures were to be undertaken there was no time for delay. I may add here that though, of course, we all diagnosed perforation of the stomach, we were inclined to attribute it to sloughing of portion of the stomach wall, previously involved in the hernia, rather than to a perforating ulcer of the ordinary type.

The patient's relatives seeing his collapsed condition, and being told frankly that the operation held out no great hopes of saving him, were unwilling to subject him to what seemed useless and additional suffering, and I confess with this feeling I largely sympathised. On laying the case fairly and squarely before the patient, to our great surprise he at once elected to be operated on, saying with both wisdom and resolution that he would rather die at once on the table than prolong his present agony till the inevitable end came.

As the accommodation in his present quarters was totally inadequate for such a grave operation, it was decided to remove him to the Richmond Hospital close by and operate there. This was done, and all preparations being duly completed, ether was administered by our then house surgeon, Dr. Louis Robinson. Dr. Harvey, assistant surgeon to the hospital, assisted me at the operation, which was witnessed by Sir Francis Cruickshank, Dr. Moran, and the resident staff.

An incision was made in the middle line so as to expose the umbilical hernia; exploration of this showed that the hernia was reduced, but the sac was very thick, and contained some fatty

masses in its outer surface, which gave me the impression that the hernia had partially recurred, or had been incompletely reduced. Coils of intestine now flaked with lymph came into view, and a little later fluid, evidently from within the bowel somewhere, trickled down from above. The wound was, therefore, enlarged upwards, and a very slight search brought the perforation into view. It was in the anterior stomach wall some two inches from pylorus, and was about  $\frac{1}{2}$  inch long extending vertically from above down. There was no evidence of any constriction around it to indicate that it had been involved in a hernia, so this hypothesis had to be abandoned. Further examination showed a good deal of thickness and hardness about the pylorus, and I at once suspected the possibility of malignant disease. A probe was passed into the opening and thence through the pylorus. It undoubtedly gave me the impression that the case was complicated by a pyloric stricture, and I at once proposed to establish a gastro-jejunal anastomosis. Sir Francis Cruise, however, in answer to my inquiry as to the patient's strength being sufficient to stand this additional procedure, informed me that if the operation was not promptly completed the patient would die on the table. I resolved, therefore, to close the wound in the stomach, and postponed any further measures until the patient had rallied. The edges of the little wound were, therefore, carefully resected, and closed with a double row of silk sutures, the first continuous, the second interrupted. As the patient was now practically pulseless and very cold, thorough cleansing of the peritoneum was impossible, and it was resolved to douche the abdominal cavity with a hot saline solution. This was done while the sutures were being passed in the abdominal wall, and had a very stimulating effect, the patient at once rallying. A small gauze drain was carried down to the line of sutures in stomach, as it was felt that the rapidity with which the operation details had been carried out prevented us placing absolute confidence in the completeness and permanence of the suturing. The patient having been carried back to bed, vigorous methods were adopted to rouse his dormant energies. His limbs were completely enveloped in cotton wool, hot blankets were wrapped around him, hypodermics of strychnine and atropine and rectal injections were administered, the end of the bed raised about a foot above the level of the head,

to encourage the central blood supply, and hot saline solutions with a transfusion outfit were kept handy, to be available in case of emergency.

For several hours he hovered between life and death, but gradually his latent energy began to manifest itself, the pulse at the wrist again became perceptible, the sufferer became warmer, and he gradually recovered consciousness. From that moment until the fourteenth day he never looked back. Nursed with the most assiduous care under the directions of Miss M'Donnell, our Lady Superintendent, he recovered with a rapidity that I have never seen equalled by one of his age before. On the fourteenth day, when I visited him, a serious change had taken place. He was gold and blanched, pulse very rapid and fluttering, breathing hurried, complained of great thirst, and said he felt himself dying. Inquiry elicited the fact that during the act of defæcation copious hæmorrhage had taken place from the bowels, and two pans filled with fluid blood bore testimony to the statement. While speaking to him he complained of again wanting to stool, and then and there he passed another panful of blood. Needless to say, this was a terrible blow to us; just as we had piloted him, as we thought, through all his dangers, was his barque foundering within sight of land? A hurried consultation with my friends, Sir Francis Cruise and Dr. Moran, was held, and though it was obvious that to administer an anæsthetic and thoroughly explore the rectum was out of the question, we thought it might be possible without undue shock to find the bleeding spot and control it.

A large soap and water enema was given at once, the rectum well emptied, and then just inside the anal margin a ring of swollen, deeply congested piles were seen. A little cocain solution was swabbed over them, and then a tampon of cotton wool soaked in Friar's balsam was inserted and kept in place with a pad and bandage.

This had the desired effect; no more bleeding occurred, and though convalescence was seriously retarded by this untoward complication, the patient some six weeks after the operation was driven in a pneumatic-tyred carriage to Kingstown, where the fresh air and sea breezes soon restored him to his pristine vigour. He is now, I am glad to say, back again at his business as a director of one of the largest commercial enterprises in the city.

I have given the details of this case at some length, partly because it was by far the most interesting of all those I have met, but also because it was the most recent, and, therefore, the impressions derived from it were the strongest. The total number of cases I have operated on up to the present, in which the diagnosis of perforating gastric ulcer was made before and verified at the operation, is four.

Of these, three occurred in females, and one in a male. Of the three in women two died, one some twelve hours after the operation, and the other exhausted by prolonged suppuration and leakage through a gastric fistula.

A few brief notes of these I will lay before the meeting:—

Mary A., aged nineteen, a servant in the Young Women's Christian Association, Harcourt-street, was attacked suddenly with violent abdominal pain, vomiting, and collapse; no hæmorrhage. Called to see her, I at once diagnosed perforation, and had her removed to the Richmond Hospital. She was seen by my colleagues in consultation, and an operation urged upon her. This she declined. Two days later she was much better, and felt convinced she had been wiser than her medical advisers. She was seen from time to time by my colleagues, and complained only of a feeling of fullness in the epigastric area, and some tenderness on pressure. She was living on a fluid diet, and had no vomiting. Some six weeks after her admission to hospital she suddenly developed acute pain in the abdomen, a swelling formed in the left side of epigastrium, dull on percussion, with œdema of skin over it. It was obvious an abscess was forming. At the urgent solicitation of her friends she consented to the abscess being opened, but no further operation was to be attempted. As a matter of fact nothing else could be done. A large abscess was evacuated, but the thick layer of lymph which covered everything made it impossible to recognise any of the viscera, or to find the opening of the stomach.

The cavity was douched out and drained, and for a time we hoped she would recover, but she gradually sank and died of exhaustion.

Had this girl consented to the operation proposed within

a few hours of the onset of her illness, in all probability her life would have been saved.

The other two cases may be dealt with briefly. One was a woman, aged about thirty, in whom perforation had taken place some days before admission to hospital. She was emaciated to an extreme degree, and a large collection of fluid could be easily recognised in the abdomen. In cutting into this quantities of half digested potatoes and the liquid contents of the stomach were discovered, but she never rallied, and died very soon after the operation.

The fourth case was most interesting.

Patient, a married lady, aged thirty-two, was seized with violent pains in the abdomen, vomiting and collapse; no bleeding. When I saw her the collapse was so pronounced that operation was out of the question. Heat was applied to the epigastrium, rectal injections of alcohol, and a small hypodermic of morphia given later. Twenty-four hours later pain had subsided, but there was one spot very tender, exactly in the middle line. Operation proposed and declined, patient alleging, with a certain amount of justification for her belief, that she felt certain she would die on the table. Five days later a small abscess had formed. This was explored with a hypodermic syringe, and the diagnosis being thus verified, local anæsthesia was produced with the ether spray, and the abscess opened with a tenotome. About an ounce or so of thick pus evacuated and a small drainage tube inserted. Though I naturally gave a very unfavourable prognosis, the patient recovered rapidly, and is alive and well to-day.

So far for the cases in which the diagnosis of perforation was made and verified by operation.

But, in common with all surgeons of any experience, I have diagnosed perforation of the stomach which did not exist. In one case in which I was mistaken, a remarkably accurate diagnosis had been made by a much younger man, Dr. Grandy, at one time house surgeon at the Mater Hospital. He sent a patient into the Richmond Hospital in

whom he had diagnosed perforation of the bile duct, but which I confess I believed to be a perforation of the stomach. Laparotomy was performed. A biliary abscess was opened and drained, but it was found impossible to discover the seat of perforation. The patient gradually sank and died of exhaustion. The autopsy was made by my friend Dr. Woods, who discovered a perforation of the cystic duct.

In another case in which perforation of the stomach was diagnosed, I found that organ apparently perfectly healthy, and nothing but a localised collection of peritoneal fluid.

My friend, Dr. Chance, some time ago operated on a similar case, in which also nothing abnormal could be discovered.

Quite recently Dr. Conway Dwyer exhibited at another scientific gathering a patient on whom he had operated for perforation of the stomach, but exploration showed that the lesion was an acute strangulation of a coil of the jejunum, which he resected with the most brilliant success. I mention these cases because in these, as in all other abdominal cases, the liability to error in diagnosis is ever present. It is because of this inherent weakness in the power of diagnosis that one is compelled to question the accuracy of the statement so often made at the last meeting of the British Medical Association that recovery frequently takes place spontaneously after perforation.

I confess myself unable to accept such a result as probable, or even possible, except in a very minute proportion of cases.

Should a perforation occur, of the pinhole type, in an absolutely empty stomach, no extravasation of the contents need take place, and the little opening may soon be shut off by exudation.

The experience of physicians, pathologists, and operators is entirely opposed to the belief in the frequency of such a

fortunate combination of circumstances. In this connection, Hume's theory of miracles seems to be applicable.

Is it not more probable that the diagnosis was erroneous than that phenomena opposed to all pathological experience have occurred? Forgive me if I appear to labour this point, but it is vital and essential.

If spontaneous recovery is at all within the limits of probability, operation might very well be at least delayed. I venture to say, however, that very few men, even of those with the most profound belief in the efficacy of drugs and the powers of human resistance, would take the responsibility on themselves of recommending a patient in a case of supposed perforation not to submit to operation, but to trust to the *vis medicatrix naturee*. Surgical experience, now fairly extensive in this subject, has shown that the earlier the operation is undertaken, other factors being appropriate, the better the chance of success.

If the abdomen is opened before exudation of lymph has taken place, the opening is generally easily found. If twenty-four hours have elapsed in an average patient, the matting together of all the organs, and their envelopment in a thick layer of lymph, renders it practically impossible. In such a case death from exhaustion is almost, though not absolutely, inevitable.

Again, in approaching a case of perforation the surgeon must remember that the operation may be very easy or very difficult. If the opening is in front and the operation is promptly undertaken the work will not be difficult. If the opening is behind, or the operation delayed, it may tax all the surgeon's resources and end in failure and disappointment. Two points in the technique I would like to refer to—1st. The use of the douche, and 2ndly, the use of a drain. It is urged against the use of the douche that it may convey infecting particles to areas as yet uninfected,



and thus prove the cause of a general septic peritonitis. *Per contra*, it is urged that no amount of mopping can ever completely cleanse the peritoneum, and Mr. Treves quite recently has drawn attention to the fatal injury that may be done to its smooth, glossy and absorbent surface by violence applied to it under a mistaken idea of its function and limitations.

I must confess I am rather against the mopping plan, and favour the thorough douching. If the nozzle of the douche is carried low down into the pelvis first, and later into the flanks, the stream of warm water rushing out through the wound under pressure will carry practically everything with it. It may be necessary here and there to assist this process by wiping away all adherent particles, but it is only the stomach contents that need to be wiped away, the lymph exudation may well be left alone unless there is reason to believe that it is already a centre of decomposition and infection.

Lastly, I believe these cases ought to be drained until the temperature is normal, and until the seat of perforation is shut off from the general cavity of the peritoneum. The tissues around the seat of ulceration are generally unhealthy, and even the most expert operator may have his doubts as to the durability of his suturing under such circumstances.

I fear I can hardly claim to have laid anything new before you, but the subject though not novel is not without interest; it deals with a fairly common condition, and therefore appeals to physicians and surgeons alike.

When we remember that even 20 years ago such operations as those I have outlined to you, if suggested by an operator, would have been regarded as the dream of a lunatic, one cannot help feeling both proud and hopeful of our art.

The modern operation of laparotomy, simple as it seems to-day, has only reached its present position through the combined labours, trials, experiments, and disappointments

of the greatest minds of our age. Though it is not given to all of us to be originators of great ideas we can, all alike, at least help in the good work by repeating and verifying the work done by the pioneers of science, and so contribute even an imperceptible mite to that beneficent knowledge which our profession, to its credit be it said, has ever held to be the common heritage of humanity.

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SIR F. CRUISE bore out all Mr. Myles said in his paper. He had learnt from the case *nil desperandum*. The patient was almost pulseless at the commencement of the administration of the chloroform; the pulse became much better when the chloroform was changed to ether. The result of the operation was most extraordinary.

MR. WHEELER congratulated Mr. Myles on the excellent result, which showed that early operation offers better chances of recovery than delayed operation. He preferred swabbing out the abdomen to douching. He had seen saline solution revive a patient on whom he operated for tubercular peritonitis. It depended on the position of the perforation of the stomach whether the operation could be rapidly done or done at all.

MR. CHANCE mentioned the case of a young woman with gastric ulcer who suddenly became collapsed with symptoms of perforation. Laparotomy was at once performed, but thorough examination of the stomach revealed nothing. The abdomen was closed, and recovery followed. In another case, that of a woman, he opened the abdominal cavity, and found in an abscess a small cavity, a good deal of flocculent material, and a considerable quantity of undigested food. He drained the abscess, and recovery followed. The mortality of stomach operations seemed very high according to statistics, because the operation was done for malignant disease.

MR. MYLES replied.