

THE SURGERY OF ANASTOMOTIC ULCERATION

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by
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A MARK OF an experienced gastric surgeon is his ability to diagnose the anastomotic ulcers which follow his own operations or the operations of other surgeons. Even in this age of technical "know how," diagnosis still precedes treatment. Once diagnosed, the surgical treatment of anastomotic ulceration is beginning to follow certain definite lines.

The emphasis of this lecture will fall on diagnosis. Its facts have their foundation in the clinical stories and investigation of eighty-seven patients observed during the past eight years.

What is the magnitude of the problem ?

In the large community hospital in which this work was done, we do between us over 200 partial gastrectomies for peptic ulceration each year. The hospital serves a quarter of a million people; assuming the same rate for the rest of Britain's population of 50,000,000, then 36,000 stomachs are taken out of the abdominal cavity each year, 3,000 a month, 100 a day.

Every quarter of an hour one of our patients loses part of his stomach.

Supposing these 36,000 specimens were placed end to end, they would stretch from Buckingham Palace to St. Paul's Cathedral following the Royal Route.

It is commonly accepted that over half of these gastrectomies are done for duodenal ulceration, and at least four in every hundred will develop a further anastomotic ulcer. If we add to this the anastomotic ulcers which continue to be found in these the third and fourth decades following the "hey-day" of gastro-enterostomy, we can therefore expect well over 1,000 new patients with this lesion each year.

CLASSIFICATION

These anastomotic ulcers fall naturally into the following groups.

		Total	Age range 22-84		
		87	Male 76.	Female 11.	
GROUPS					
Polya	40
Gastro-enterostomy	34
Billroth I	8
Gastro-jéjuno-colic	5

You will notice there are only eleven anastomotic ulcers in women, eight of which followed gastro-enterostomy.

Lastly, comment will be made on a group who have been subjected to surgery in whom no anastomotic lesion was found.

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W. W. DAVEY

THE POLYA GROUP

TABLE II

Anastomotic Ulcer. Polya Group. 40

PRESENTATION

Pain	26
Haemorrhage	20
Perforation	7

Pain is the great symptom which brings peptic ulcer patients to their doctors. There is no exception to this in the case of anastomotic ulcers, even though the surgeon has grossly altered the anatomy of the foregut and disrupted its nervous pathways. Figure 1 maps the localization of pain which was present in two out of every three patients.

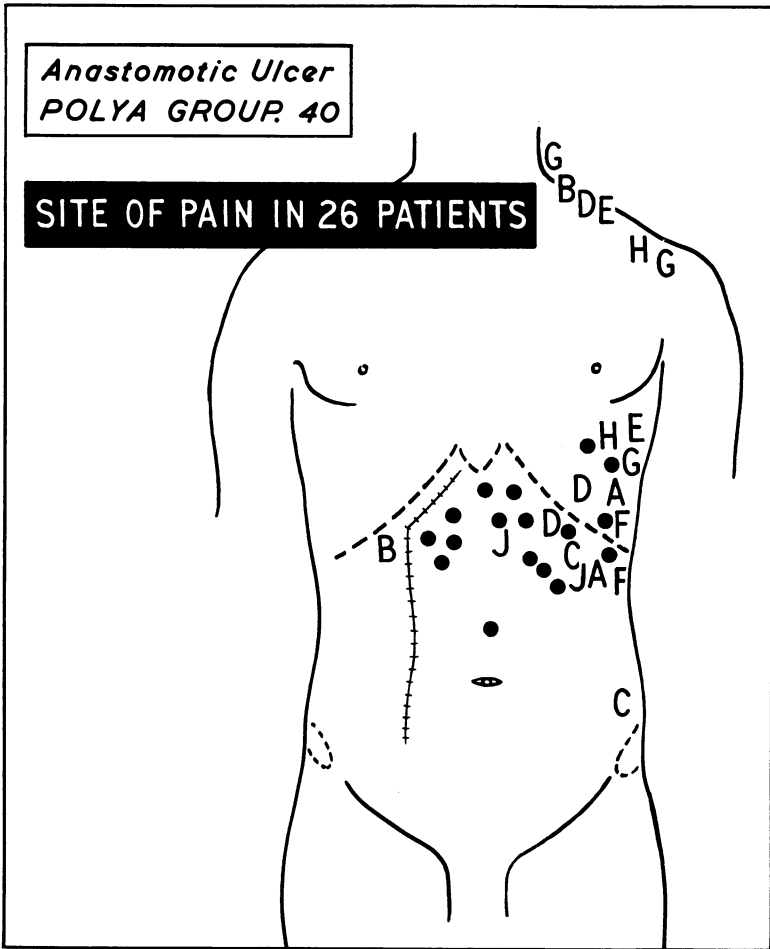


Fig. 1. Where letters are used it indicates that the patient has pain in more than one area.

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You will see from a study of the chart that the pain falls into two areas. On the one hand the patient complains of epigastric pain, and may even volunteer that his old ulcer pain has returned. It would be nice in these cases to believe there is such a thing as "phantom" ulcer but, alas, the patient is nearly always right; his ulcer has returned. On the other hand he may complain of symptoms suggesting a lesion of the left chest and shoulder. Should these symptoms develop soon after his Polya gastrectomy—and our earliest was less than six weeks—then it is likely that a cause for the pain may be sought below the diaphragm.

But if there is a reasonable time interval, and the average in this series was twenty months, the diagnostic ball may be set rolling in the wrong direction, for example:

A male patient who had had a Polya gastrectomy for duodenal ulcer eleven months previously, complained persistently of pain in the left



Fig. 2. Notice pigmentation of the skin from the repeated application of a hot water bottle and a right paramedian incision used for the Polya gastrectomy.

shoulder. On examination there was crepitus in the joint and an X-ray showing calcification in the supraspinatus tendon further helped to focus attention on this region. He was receiving physiotherapy before it was realised that his pain was due to a large anastomotic ulcer penetrating the underside of his left diaphragm.

Yet another patient complained of constant severe pain in the left upper quadrant of the abdomen, for which he was taking aspirin every half-hour. He became emotional and wept more and more as his doctors appeared to understand him less and less, and finally he brought matters to a head when he drank a whole bottle of "Carbrital" in an attempt to gain relief. The base of his ulcer had become part of the periphery of his diaphragm.

Granted the history of a previous Polya gastrectomy for duodenal ulcer, Figure 2 should almost be pathognomonic of an anastomotic ulcer penetrating the left diaphragm.



Fig. 3. Shows clearly the crater of a large penetrating ulcer in the efferent jejunum of an ante-colic Polya gastrectomy.

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Haemorrhage

TABLE III
Anastomotic Ulcer. Polya Group. 40
HAEMORRHAGE

	Total	..	20
Melaena	..	..	15
Melaena and Haematemesis	..	..	4
Haematemesis	..	..	1

In half of the patients there was haemorrhage and this was nearly always in the form of melaena. In five patients the melaena was silent. All of the patients got better without emergency surgery.

Perforation

TABLE IV
Anastomotic Ulcer. Polya Group. 40
PERFORATIONS 8
Average Time after Gastrectomy = 15 months

The gastrectomist is not kept waiting long for his perforated anastomotic ulcers, the earliest occurred in less than five months, and the latest in three and a half years, while in a man of seventy-one it took just over a year. An accurate pre-operative diagnosis was made in every case except

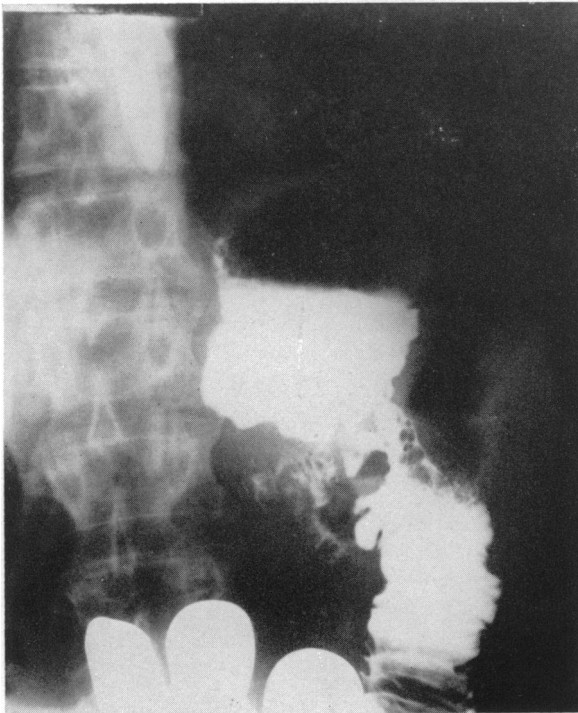


Fig. 4 (a). The efferent jejunum is deformed and stenosed immediately distal to the stomach.

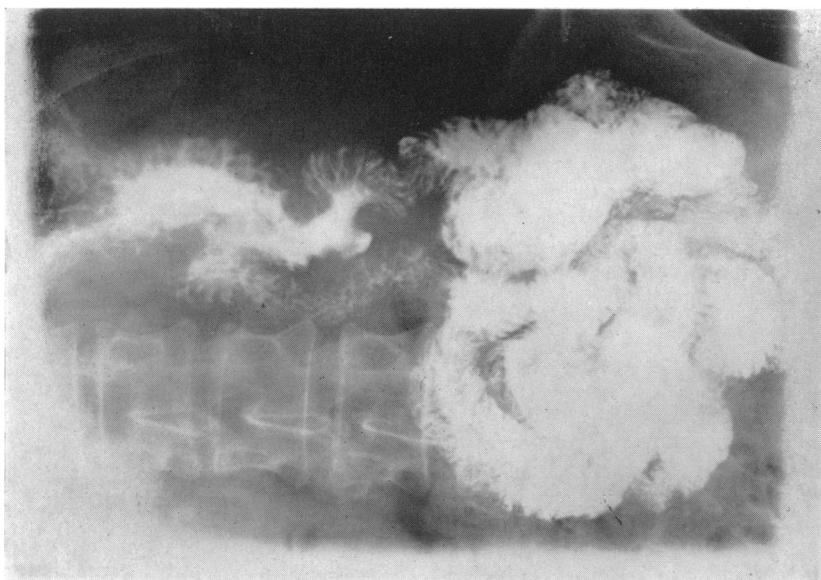


Fig. 4 (c).
Ulcer crater on mesenteric border of jejunum opposite stoma.

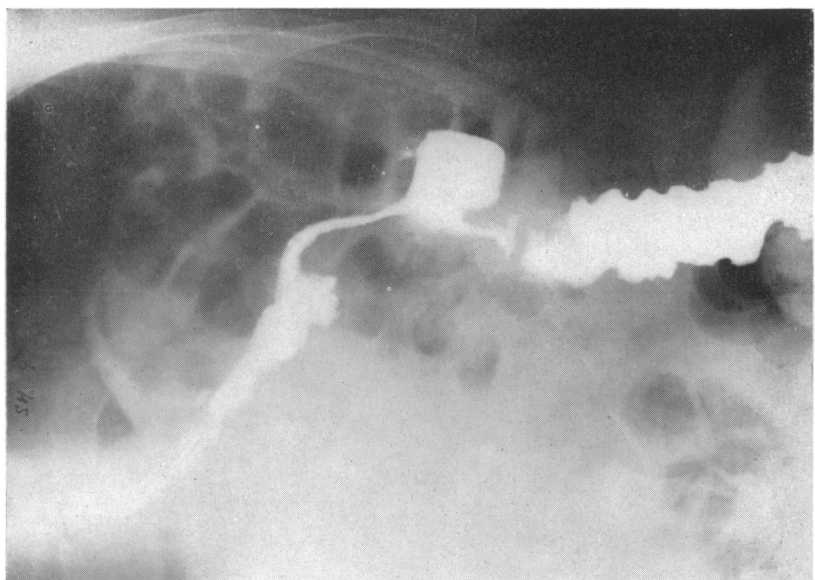


Fig. 4 (b). "Tea pot" like deformity of the proximal jejunum due to shortening at the site of the ulcer and relative elongation opposite it.



Fig. 4 (d). Adhesion running from base of ulcer to periphery of diaphragm across pneumo-peritoneum.

in one patient, admitted late to a medical ward, the cause of his left pleural effusion, his left lower lobe atelectasis and his left shoulder pain being completely overlooked during his three-month stay in hospital.

With the exception of one, all of the operations to close the perforated ulcers were surprisingly easy, owing to the fact that the anastomoses were of the antecolic type. If there are any surgeons in this audience who have yet to make up their minds as to which is the better—antecolic or retrocolic—this factor alone perhaps might help them to decide.

INVESTIGATION

Barium meal

Written all over Figure 3 are the words, "I am an anastomotic ulcer." It is the radiologist's dream, it shows everything clearly. All too often,

however, the pictures shown need the liberal application of the eye of faith and the reports contain such vaguenesses as "Suggest", "Cannot be excluded," "Stomal tenderness."

How accurate can we expect radiology to be? What are the problems? Can it be improved? Apart from the taking of a good gastric history, it is the mainstay of diagnosis.

Few radiologists can hope to achieve a high level of efficiency in this type of work unless the surgeon gives all the help he can. The most useful information is accurate technical detail about the previous operation. To obtain it, it may be necessary to write or ring up another hospital. This information is all-important; it prepares the radiologist psychologically and sets his mind free to concentrate on finding the ulcer crater rather than unravelling the tortuosities of past surgery.

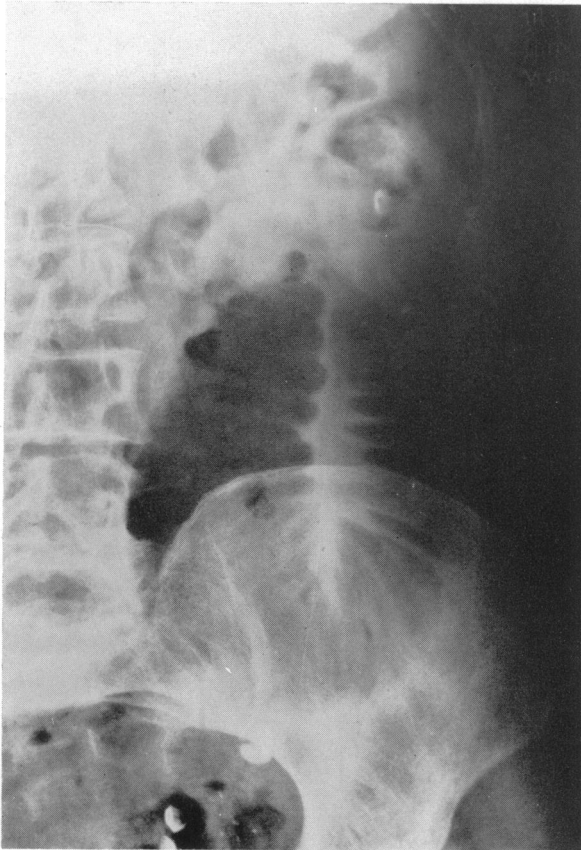


Fig. 5 (a). Straight X-ray showing air-filled dilated loop of jejunum.

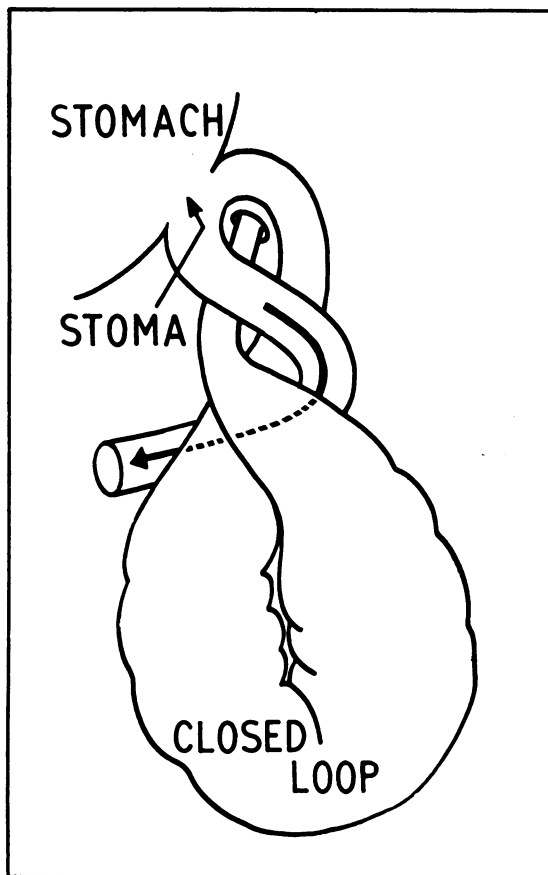


Fig. 5 (b). Indicates the mechanism of the obstruction found at operation.

In the average Polya gastrectomy, the gastro-jejunal anastomosis lies above the costal margin and this makes it impossible for the radiologist to palpate the area of the stoma and difficult to get good filling of the efferent loop, as he cannot obstruct the bowel in the flank distal to the anastomosis by direct pressure with his fingers. To help achieve this, we have found it easy to pass a balloon loaded with mercury into the efferent loop, it is then inflated to occlude the lumen, and this allows good proximal filling with barium.

Where the history suggests penetration of the diaphragm, a barium meal coupled with a pneumo-peritoneum may demonstrate the lesion and its attachments.

Using these techniques, with willingness to repeat the examination on several occasions if necessary, and above all providing the radiologist

with all the information we can get, a positive diagnosis has been made in twenty-four out of the thirty-six patients who had barium meals. Figures 4a, b, c and d, are examples.

It is possible that the arrival of the image intensifier will lead to great advance in this difficult branch of radiology.

Gastroscopy

TABLE V
Anastomotic Ulcer. Polya Group. 40
GASTROSCOPIES

	Total	..	26
Ulcer seen	..	..	8
Ligatures seen	..	..	1

In one-third of the patients examined by this method, the ulcer was seen. In only two of these was the lesion not seen previously by radiology.

THE GASTRO-ENTEROSTOMY GROUP

TABLE VI
Anastomotic Ulcer. The Gastro-Enterostomy Group. 34
PRESENTATION

Haemorrhage	25
Pain	17
Perforation	3
Palpable lump	2

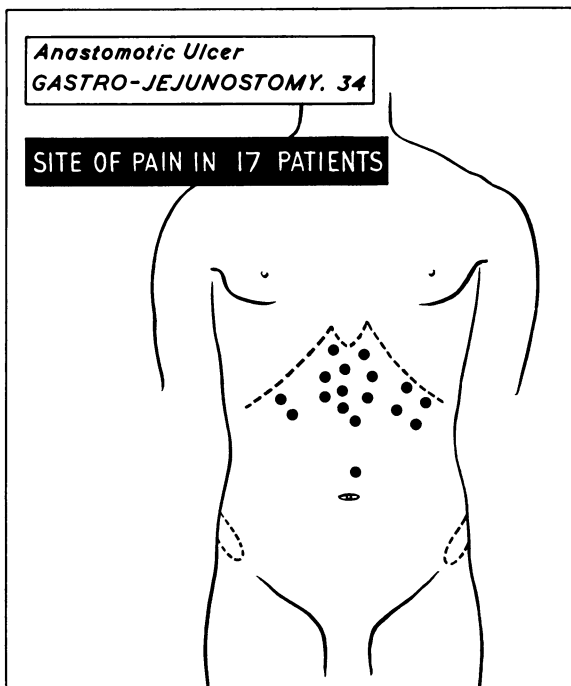


Fig. 6.

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In the gastro-enterostomy group of anastomotic ulcers, contrasted with the Polya group, you will see that haemorrhage has changed places with pain as being the commonest symptom. It occurred in three out of four patients.

Haematemesis is as common as melaena and they often occur together. Only on one occasion was emergency surgery needed to control the bleeding and the operation consisted of simple disconnection of the gastro-enterostomy, with repair of the stomach and jejunum.

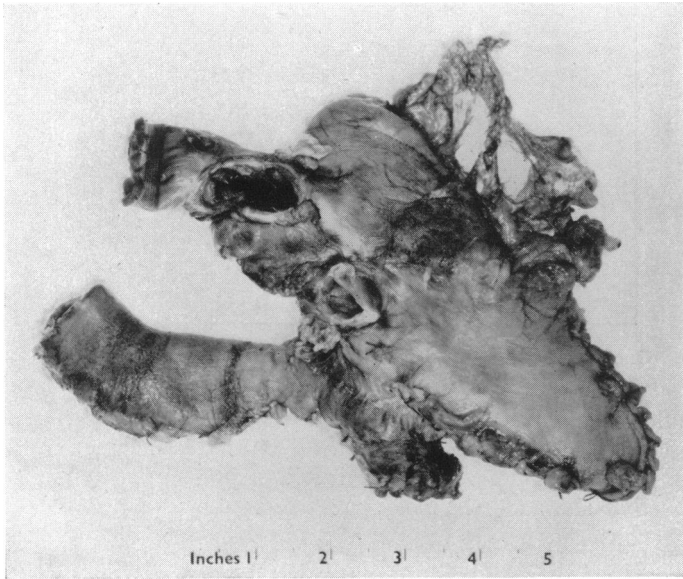


Fig. 7. Resected specimen of double gastro-jejunostomy. The large hole at the commencement of the most distal loop indicates the floor of an anastomotic ulcer which was penetrating the anterior abdominal wall. Beside it in the same loop a second circular ulcer is seen.

In another patient, gastroscopy led to an emergency. Apparently during this examination, the afferent loop, which was too long, was inflated with air, and this caused a closed loop obstruction, a condition so well described by Professor Stammers (Fig. 5*a* and *b*).

Pain occurred in 50 per cent. of patients, its distribution is mapped in Figure 6. Often it was not severe. This is probably due to the fact that the ulcer seldom involved the parietal peritoneum.

On an average an anastomotic ulcer was not diagnosed in this series till over ten years following the initial operation. In one patient it was delayed for thirty-nine years, while the outstanding exception to this late onset was a lady from Cyprus. Perhaps the recent sad happenings in that island had been transmitted to her upper alimentary tract.

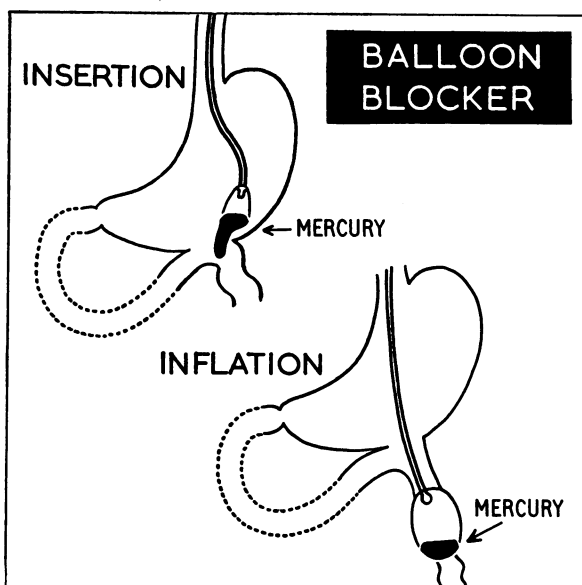


Fig. 8. Once the balloon has reached the efferent jejunum, it is inflated and the barium is given.

I would like to describe this patient, for it shows how vicious these anastomotic ulcers can be. She was admitted a frightened, haunted creature in obvious pain. Unable to speak English, we found out with difficulty that she had had two upper abdominal operations within ten days of each other two years previously. Pain in the epigastrium and back, at the same level, quickly followed these operations and had been continuous and severe ever since.

On examination we found a tender mass in the right upper quadrant of the abdomen. Having had several patients with hydatid cysts from Cyprus, this diagnosis was considered and eliminated. Then an inflammatory mass of the gall bladder was contemplated and ruled out by a normal cholecystogram. A barium meal was difficult to decipher.

At operation a stomach with two gastro-enterostomies, anterior and posterior, was revealed, and two anastomotic ulcers, the larger of which was penetrating the anterior abdominal wall and accounted for the palpable mass. Figure 7 gives a good picture of our findings.

She has now an antecolic Polya gastrectomy and has returned to Cyprus—the emissary of abdominal peace, which I sincerely hope will have widespread radiation.

Of the three patients who presented with perforated gastro-jejunal ulcers, one was an octogenarian, the surgeon who sutured his second perforated duodenal ulcer less than two years previously had compassion

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on him and added a short circuit. Fullness of years is no passport to freedom from stomal ulceration.

Confusion often comes from consideration of the decrease of acidity with advancing age, forgetting that mucosal resistance also declines and the end result is still peptic ulceration.

INVESTIGATION

Barium meal

This was carried out in twenty-nine patients. In eighteen of them a definite diagnosis was made. The problems are similar to those of anastomotic ulcer occurring with a Polya gastrectomy and similar methods were used to overcome them.

Figure 8 demonstrates how the Balloon Blocker is used.

Figures 9*a* and *b* illustrate ulcers with the balloon in place, while Figures 9*c* and *d* show ulcers without any special technique. Generally speaking, the wider the stoma the more difficult it is to make a definite

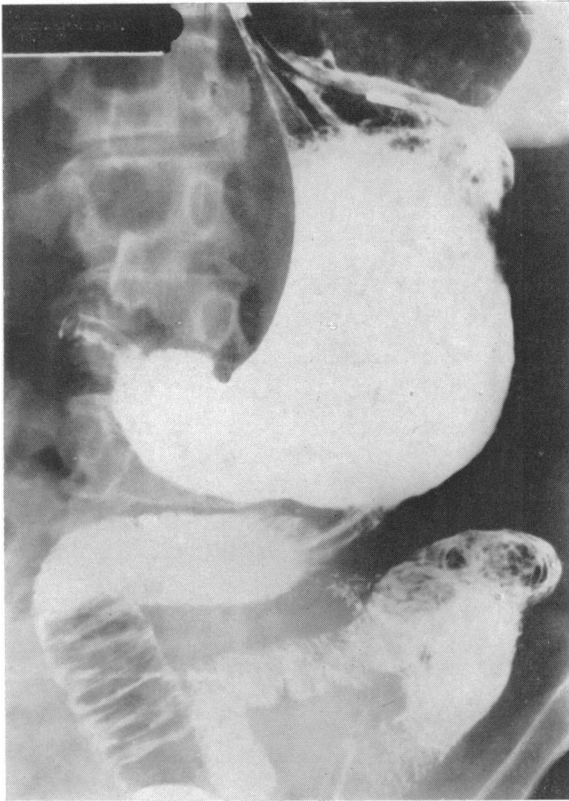


Fig. 9 (*a*). Persistent stenosis of the proximal jejunum with distal inflated balloon and mercury.

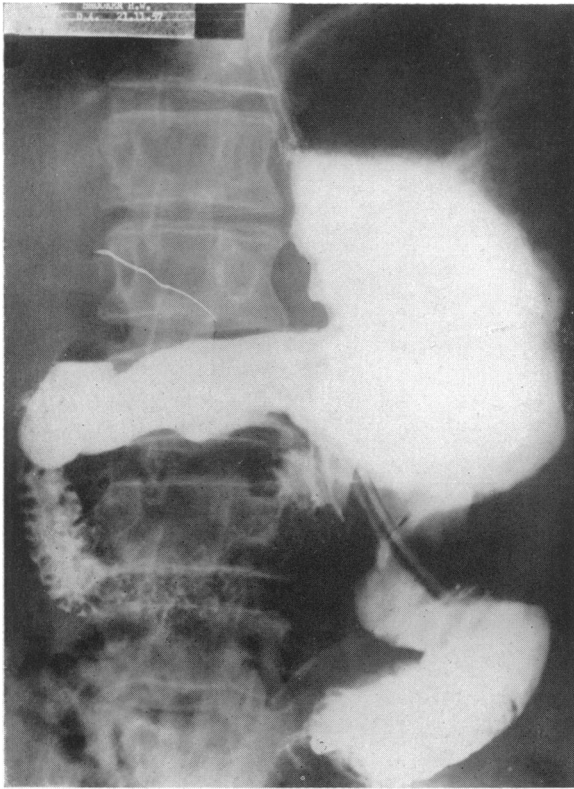


Fig. 9 (b). Showing elongated ulcer crater about 2cms. from the stoma, with the upper part of the inflated balloon.

diagnosis. I would like to record my thanks to Dr. Stachurko, who patiently carried out most of these examinations.

Gastroscopy

This was of very little value ; in only two out of twenty-five patients in whom the investigation was carried out was the ulcer seen, and in these patients it had been diagnosed previously by radiology. It has to be remembered, however, that it is tempting to diagnose stomal ulceration in a patient who bleeds and has had a previous gastro-jejunostomy. In three such patients the diagnosis of lesser curve gastric ulcer was made with the gastroscope, having been missed radiologically.

BILLROTH I GROUP

TABLE VII

Anastomotic Ulcer. Billroth I. 8
Original lesions. D.U.5. G.U.3

PRESENTATION

Pain	7
Haemorrhage	3

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Epigastric pain was the rule and it frequently radiated into the back at the same level. There was often a good deal of delay before the diagnosis of anastomotic ulcer was considered in these patients.

Three of the eight patients presented with bleeding, and emergency surgery had to be undertaken in two.

The first man had an emergency Billroth I gastrectomy carried out for bleeding from a duodenal ulcer. The ulcer was removed. At a convalescent home forty days later he had a severe haemorrhage and was transferred back to hospital. A second emergency operation was done. A further duodenal or anastomotic ulcer had developed just distal to the anastomosis. On this occasion his Billroth I gastrectomy was converted to a Polya gastrectomy and the ulcer removed.

The second man is also worthy of note. His duodenal history started over thirty years ago and included a gastro-jejunostomy, a jejuno-jejunostomy, and a Billroth I gastrectomy. These operations were punctuated with periodic pain and ten serious haemorrhages. He was admitted to hospital on account of a further haemorrhage and in view of his obesity and scarred abdomen, conservative treatment was persisted



Fig. 9 (c). Showing "tre-foil" type of deformity of the proximal jejunum.

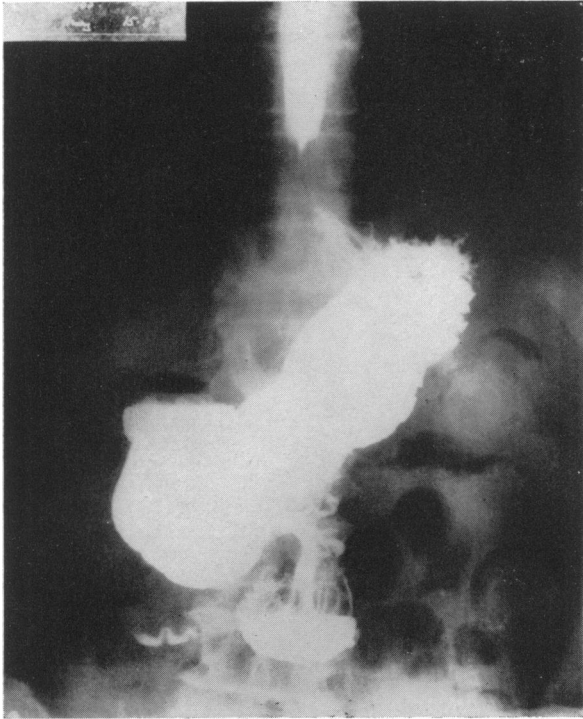


Fig. 9 (d). Showing gross deformity of the proximal jejunum.

in to the extent of twenty-two pints of blood, but it was of no avail. His Billroth I gastrectomy had to be changed to a Polya gastrectomy urgently.

The bleeding occurred from an ulcer penetrating the pancreas just distal to the old gastro-duodenal suture line.

Barium meals were done in five patients and a confident diagnosis of anastomotic ulcer was made in four.

Figures 10a and b are good examples.

It should be remembered, however, that irregularities on the re-fashioned lesser curvatures of Billroth I gastrectomies can be wrongly diagnosed as anastomotic ulcers and to base the diagnosis on radiology alone in such cases will lead to fruitless laparotomy.

Gastroscopy was done in five patients and the only one in which an ulcer was seen is of considerable interest: a man whose history extended over thirty years and included countless haemorrhages, fourteen of which needed admission to hospital. At first he had a duodenal ulcer treated by gastro-enterostomy, and later by Billroth I gastrectomy, but his bleeding continued. The noting of an enlarged spleen "threw a spanner in the works" for a diagnosis, and numerous barium meal studies did not help.

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Gastroscopey carried out in a cottage hospital showed the cause of bleeding to be a small ulcer just distal to the old suture line, and what had proved a baffling case in diagnosis for the past fifteen years had at last been solved by the gastroscope, which does not usually help in such cases.

THE GASTRO-JEJUNO-COLIC GROUP

TABLE VIII

Anastomotic Ulcer. Gastro-Jejuno-Colic. 5
PRESENTATION

Diarrhoea	..	..	..	..	..	..	..	..	..	5
Weight loss	..	..	..	..	..	..	..	..	..	2
Faecal vomiting	..	..	..	..	..	..	..	..	..	2

Radiology

In only one of these patients was the diagnosis not made by carrying out a barium enema. Strange as it may seem, if the diagnosis is sought by means of a barium meal, it may be overlooked.

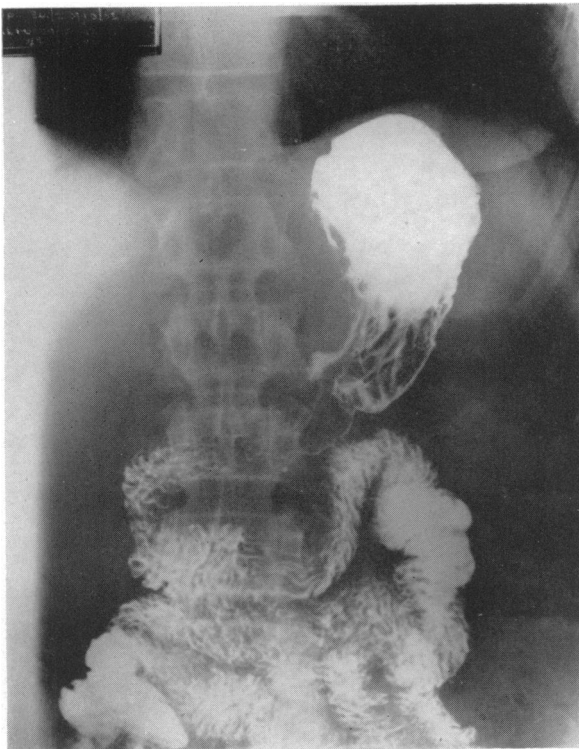


Fig. 10 (a). Billroth I gastrectomy with ulcer on anastomotic line. Crater of ulcer seen in profile on lesser curve.

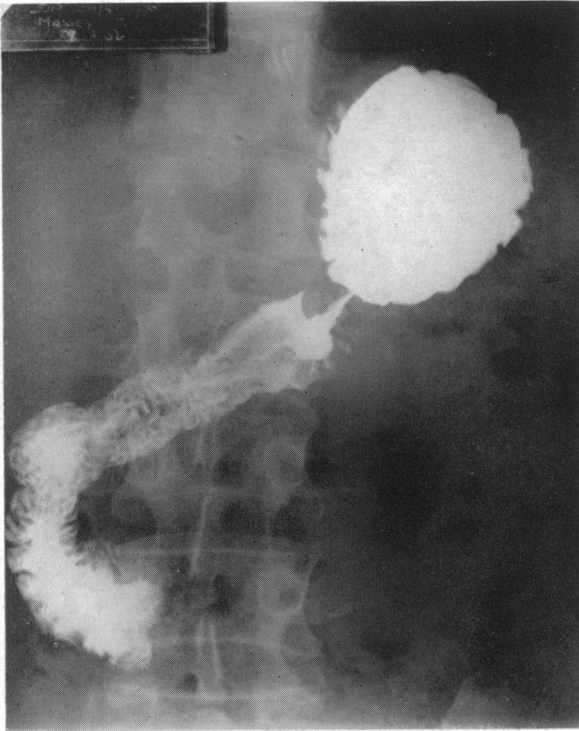


Fig. 10 (b). Billroth I gastrectomy with ulcer on anastomotic line. Circular crater of posterior ulcer with radiating mucosal folds.

If neither a barium enema nor a barium meal demonstrates a fistula and one is suspected, it is attractive to believe that a methylene blue enema followed by gastroscopy will give the answer.

The patient who died was tired of life and tired of his surgeons. Three previous gastric operations had failed to convince him that yet another would help, and, refusing operation, his gastro-jejuno-colic fistula was found at post-mortem.

Lastly, there is a group of patients numbering thirteen, in whom no anastomotic ulcer was found at laparotomy. What have we learned from these patients?

Three of them gave a clue to their true nature at gastroscopy, before laparotomy. They were found to have non-absorbable suture material hanging into the lumen of the stomach, a relic of previous surgery, and a warning not to use this material in this situation. At laparotomy this suture material was found to arise from a granulating tract in the stomach wall. Its removal cured the patients.

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If the signs and symptoms of an anastomotic ulcer come on in a patient who has done well following his operation and has had few post-gastrectomy symptoms, the diagnosis is usually easy. But where there are many symptoms, it is advisable to hold on till a sign appears. Especially if the patient has never admitted happiness since his gastrectomy. We have had three such patients.

In doubtful cases the bleeding episode should always be verified—one patient who had a useless operation subsequently turned out to be a false witness. His address of 1 Princes Street, Edinburgh, should have alerted our suspicions.

If the pain is little relieved by bed rest, be on the *qui vive*. Anaemia which follows a gastric operation, especially in a woman, is more likely to be due to iron deficiency than to haemorrhage.

Diarrhoea, if it is the main symptom, is a dangerous one on which to base a diagnosis of stomal ulceration. It has disappointed us on two occasions.

Polya group

TREATMENT
TABLE IX
Anastomotic Ulcer. Polya Group. 40
TREATMENT

Vagotomy	17
Vagotomy + revision gastrectomy	7
Vagotomy + excision of ulcer	7
Vagotomy + revision gastrectomy and antrectomy	2
Revision gastrectomy (previous vagotomy)	2
Vagotomy + Polya → Billroth I	2
Mild symptoms	1
Refused surgery	1
Died without surgery	1

Table IX may look complicated—but through the first six groups (thirty-seven patients) runs vagotomy—alone or with removal of the ulcer, or with modification of the gastrectomy.

Naturally, many of these patients have not been followed up for a long time, as this series only started eight years ago.

There are three known patients with further recurrences, all in the group in which vagotomy alone was done. One, a lady, has had her ulcer excised in another country, the second has had a small melaena and no symptoms, and is content to carry on. He has been otherwise well for five years. A third was unhappy on account of bilious vomiting and three years following his vagotomy his Polya gastrectomy was converted to a Billroth I, and now I am afraid he has a further ulcer. A fourth recurrence is possible. It is in the group where vagotomy was accompanied by excision of the ulcer.

The patient who died before he could be made fit for surgery must give us pause. A man aged forty-five, he had his partial gastrectomy for a peptic ulcer four years earlier; since then he had become progressively weaker. Although a man, he was sent to a mental hospital with the diagnosis of anorexia nervosa. He was markedly wasted, with hypo-

tension, and intermittent abdominal pain and distension (Fig. 11a). An attempt was made to make him fit for surgery but he died. Autopsy revealed an anastomotic ulcer which had caused stenosis of the gastric stoma with enormous distension of the afferent loop which filled the entire abdomen (Fig. 11b).

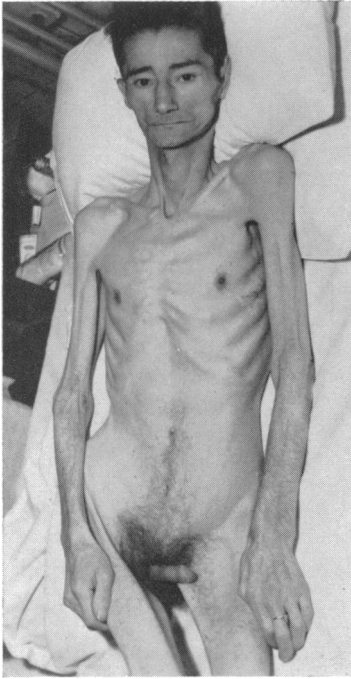


Fig. 11 (a). End result of anastomotic ulcer obstructing afferent loop.

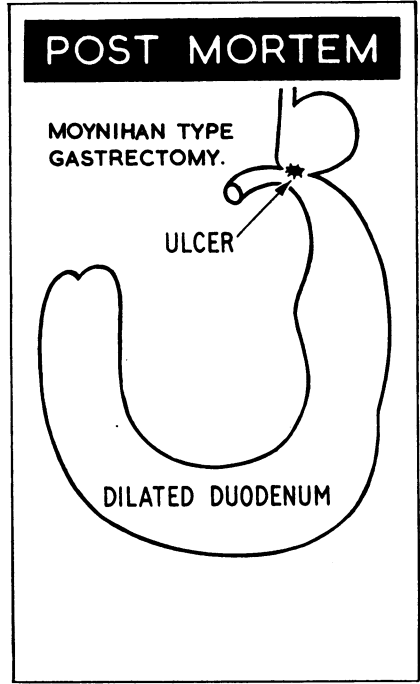


Fig. 11 (b). Explanation.

Gastro-enterostomy group

TABLE X
Anastomotic Ulcer. Gastro-Enterostomy. 34

TREATMENT							
Dismantle + Polya gastrectomy	..	..	..	..	..	..	28
Dismantle + Polya gastrectomy + vagotomy	..	..	..	..	..	..	3
Vagotomy	..	..	..	..	..	..	1
Found at P.M.	..	..	..	..	..	..	1
Conservative treatment	..	..	..	..	..	..	1

You will see that nearly all these patients were treated by dismantling of the gastro-jejunostomy and performance of a Polya gastrectomy.

There have been three recurrent ulcers in this group and this fact alone has led us to decide that dismantling, coupled with an adequate Polya gastrectomy plus vagotomy, is probably the best operation. It must be remembered, however, that dismantling is often a long and tedious opera-

tion and to add vagotomy to it in every case may well lead to increased mortality.

The patient treated by vagotomy alone is exceptional. He had a short circuit done in 1911 when aged twelve, by Mr. Carless. Thirty-nine years later, we were unwilling to diminish the size of his stomach, thinking that vagotomy alone would suffice, and so far this has been true for the past eight years.

Billroth I group

TABLE XI
Anastomotic Ulcer. Billroth I. 8
TREATMENT

Resection of ulcer + vagotomy	..	..	..	..	..	..	..	4
Billroth I → Polya (emergency)	..	..	..	..	..	..	..	2
Billroth I → Polya + vagotomy	..	..	..	..	..	..	..	1
Vagotomy + pyloroplasty	..	..	..	..	..	..	..	1

Once an anastomotic ulcer has occurred following a Billroth I gastrectomy for gastric ulcer, there is no doubt that a Polya gastrectomy should be carried out, for anastomotic ulcer following this operation when it is done for gastric ulcer is a pathological curiosity; very few cases have been described. If there is such a thing as gastro-enterological doctrine, this is part of it. It might almost be regarded as a surgical axiom. The tragedy of not realising this is very clearly shown in one patient.

His first operation was a Billroth I gastrectomy for a lesser curve gastric ulcer. Three years later he developed a stomal ulcer, this ulcer was adherent to the common bile duct in which a T-tube was placed at the end of the operation for safety. The ulcer was resected, a vagotomy done and the gastro-duodenal anastomosis reconstituted. Two years later he was admitted to another hospital with a severe haemorrhage which did not respond to blood transfusion. At operation he was found to have another anastomotic ulcer involving his gastro-duodenal artery, and he died following a long operation in which his Billroth I gastrectomy was converted into a Polya gastrectomy, the right operation only two years too late.

Gastro-jejuno-colic group

TABLE XII
Anastomotic Ulcer. Gastro-Jejuno-Colic. 5
TREATMENT

" Triple resection "	..	..	..	..	..	..	..	2
Colostomy	..	..	..	..	..	..	..	} 1
Dismantle + repair colon and jejunum	..	..	..	..	..	..	..
Polya gastrectomy	..	..	..	..	..	..	..
Closure colostomy	..	..	..	..	..	..	..	} 1
Dismantle + repair colon and jejunum	..	..	..	..	..	..	..
Polya gastrectomy	..	..	..	..	..	..	..	1
Refused surgery	..	..	..	..	..	..	..	1

The advent of the antibiotics which sterilize the large intestine has modified all colon surgery and gastro-jejuno-colic fistula is no exception. The concept of triple resection is neat and appeals to the surgical technician

who is keen to obtain a pathological trophy. But it must seldom now be necessary. The colon and jejunum can usually be repaired and even an emaciated patient can be given a short trial on these drugs in an attempt to control the diarrhoea before being given a temporary colostomy.

Technical considerations

In dismantling, if one keeps exactly to the old anastomotic line, it is often surprisingly avascular.

To repair rather than resect should be the aim. It is safer and simpler in most patients, and we have been able to do it in thirty-two out of forty-eight cases. It may not look elegant but it is immediately serviceable for the biliary and pancreatic juices which it has to carry. With resection there is a potential "closed loop" between the duodenal stump and the end-to-end anastomosis.

In patients where it is difficult to decide whether there is an ulcer or not, there is usually a sentinel gland in the mesentery of the jejunum taking part in the anastomosis.

If vagotomy is planned, it should be done at the beginning of the operation—to be convinced of this, one need only watch the oscillations of an E.C.G. machine attached to your patient when the vagus nerves are being pulled. To subject the heart to this treatment at the end of what may be a long operation is doubtful practice.

If the ulcer is obvious and large, it is better to treat the patient by preliminary bed rest, converting the necrotic tissue into fibrotic tissue with safer suturing.

Sometimes on opening the abdomen, these operations seem to be impossible, but if one works away quietly at the part of the operation which is possible, the puzzle usually solves itself satisfactorily.

In the one patient who died following these operations, the immediate cause of death was found to be acute pancreatitis and his anastomotic ulcer was found to be an ulcer cancer.

FOLLOW-UP
TABLE XIII
Anastomotic Ulcer
FOLLOW-UP
RECURRENCES

Groups	Total	Definite	Possible	Untraced
Polya	40	3	1	4
G.-E.	34	4	—	3
Billroth I	8	1 (dd)	1	—
G.-J.-C.	5	1	—	—

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This summarises the present follow-up position. It shows a recurrence rate of over 10 per cent. in a group of patients treated in many different ways and doubtless a rate which can be improved upon when only what are considered the best methods are used.

ACKNOWLEDGMENTS

Before concluding, I would like to thank Dr. Norris, my medical colleague, who has generously allowed me to see and treat so many of his patients ; and Mr. Strange, constant companion in all the decisions we have made.

CONCLUSION

If I had an anastomotic ulcer, what would I do ? I would seek admission to a gastric unit where a careful gastric history was taken—remembering that gastric patients usually need forty-minute history-taking as opposed to four-minute physical examination. I would like to be in a ward where the BED-SIDE as opposed to the BED-END manner was practised. I would like to be looked upon, not as an awkward problem,

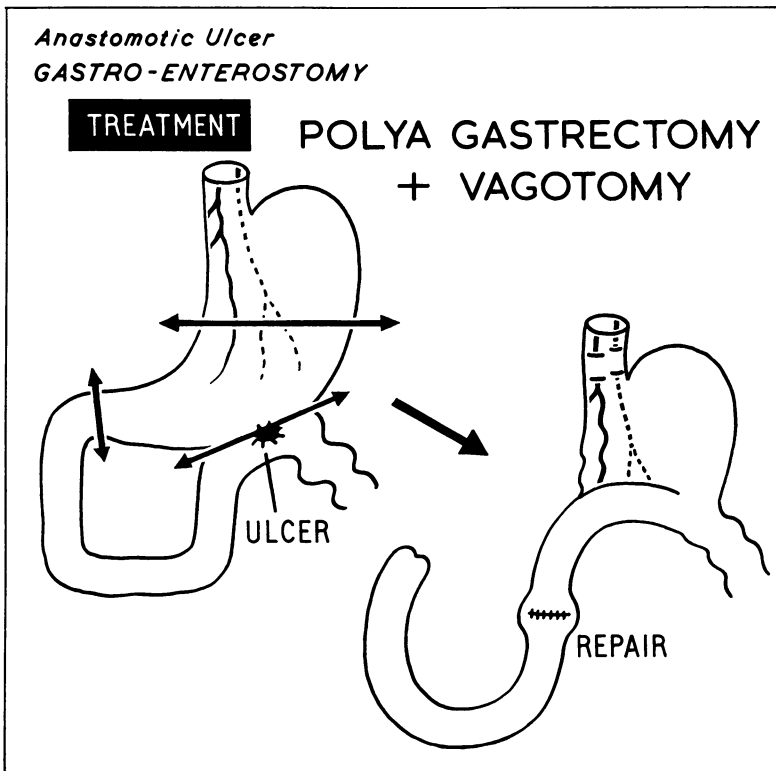


Fig. 12 (a). Treatment of anastomotic ulcer associated with gastro-enterostomy.

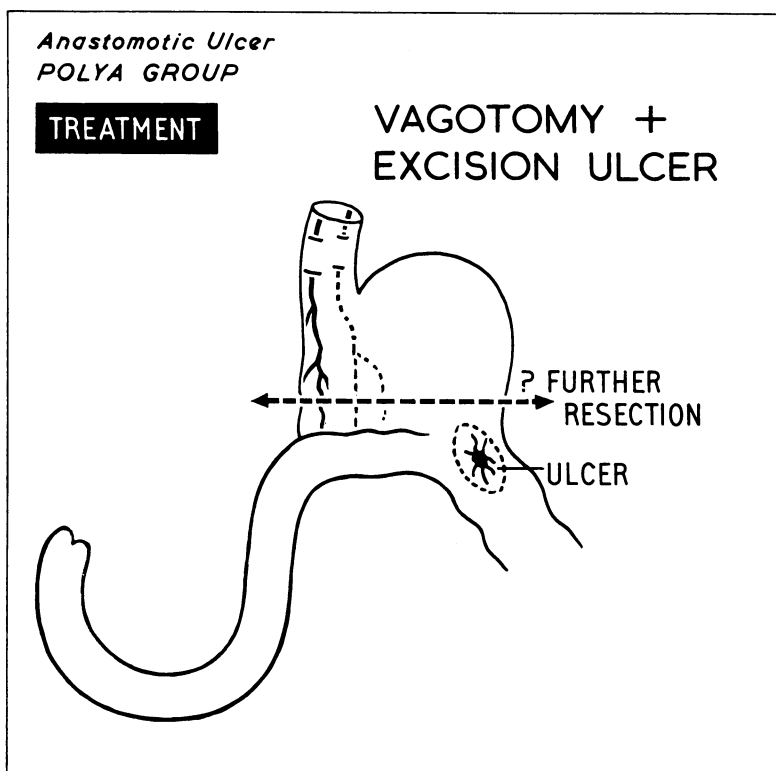


Fig. 12 (b). Treatment of anastomotic ulcer associated with Polya gastrectomy.

but as an opportunity for early diagnosis and treatment. I would like to feel that the House Surgeon would write at once to the previous hospital where I was a patient and get accurate details of my past operations. I would like a barium meal carried out by a radiologist skilled and interested in such examinations and working in harmony with the surgeon in charge of my case. I would hope my investigations would go ahead quickly—for often these ulcers are small and heal rapidly. Above all, I would like to feel my surgeon had made a pre-operative diagnosis.

At operation—if I had a previous short circuit—I would like it to be dismantled and converted to a Polya gastrectomy with a vagotomy done at the same time—assuming I was fit enough to stand all three procedures at once (Fig. 12a). I would like the vagotomy to be no grovel in the dark, but a clear demonstration of both vagus nerves and their branches by the surgeon to his assistants. I would like him to resect at least 3cm. of each nerve.

If my anastomotic ulcer followed a Polya gastrectomy, I would expect my surgeon to excise the ulcer and perform a vagotomy—or if the gastric

pouch was bigger than the palm of my hand, I would like a higher gastrectomy with the vagotomy.

If my ulcer followed a Billroth I resection for gastric ulcer, I would like it converted to a Polya.

You can see from this how important a weapon vagotomy has become.

Sir Heneage Ogilvie said in 1952: "I believe vagotomy to be dead but not yet safely buried. Fifteen years ago it shot up like a rocket into the gastro-enterological sky; it blazed into a cluster of stars and we all said, 'Oh!' Then the stars died . . ." Surely this rocket has become a satellite, revolving in an orbit of constant usefulness. At least this is the conclusion drawn from these patients.

If anastomotic ulcer is the rogue elephant among our peptic ulcer patients, vagotomy has become our chief weapon in its combat. There are many things we do not understand as yet.

If vagotomy is so important, how can we be certain of its completeness? The lack of completeness may account for many of our bad results, the work of Harold Burge may well throw light on this problem. Does the vagus nerve obey the "all or none" law? Will an unsectioned fibril produce a maximum response from the stomach? Why does anastomotic ulcer follow Polya gastrectomy so quickly and gastro-enterostomy so slowly?

Is it fair to compare the results of operations done in great numbers thirty years ago—in perhaps a more leisurely age—with the results of an operation practised to-day in an age of greater tension?

So far we have found it unnecessary to resect the whole stomach for anastomotic ulcer.



Fig. 13 (a). Sir David Wilkie.



Fig. 13 (b). Sir James Walton.

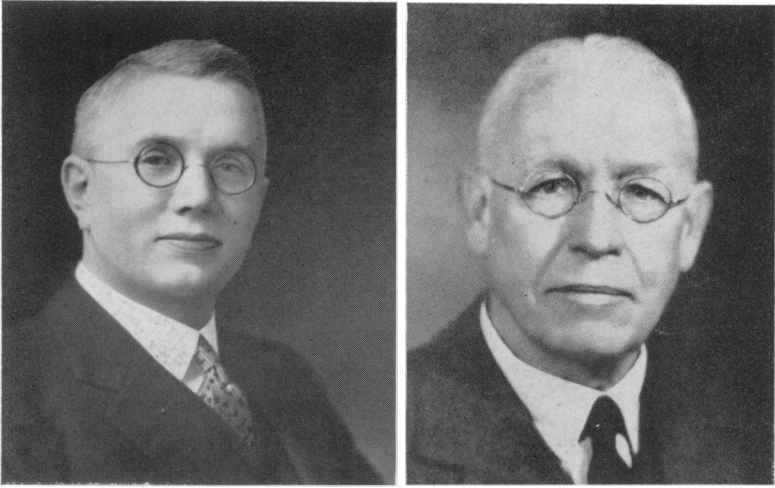


Fig. 13 (c). Mr. Cecil Joll.

Fig. 13 (d). Mr. James Sherren.

These patients particularly need individual thought and care. They have had surgery and failure. They may need to have their confidence re-won. There may be other factors in their lives which need to be dealt with radically. It will not be necessary to do higher and higher gastrectomies, and even total gastrectomy if we are willing to accept responsibility for other obvious ulcer-producing factors in their lives, habits and environment.

In going through the histories of these patients, I took no little delight in discovering that their original operations had been done by men such as Sir David Wilkie, Sir James Walton, Cecil Joll and James Sherren (Fig. 13).

They gave their patients the best they could offer in their day. In the late thirties Sir James Walton started gradually to do Polya gastrectomies for these duodenal ulcers which were accompanied by hypertrophic gastric mucosa as seen through Harman Taylor's gastroscope.

It gives us great encouragement to know that time has modified the views of these surgical giants of the past, but also humility for time will doubtless alter our own most cherished convictions.

VOLUNTARY ANNUAL SUBSCRIPTIONS

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