aged 43, who was suffering from pain in the stomach and vomiting. The history extended over six years, but there was at times intermission of the symptoms, but never permanent relief; at no time had there been haematemesis or melaena.

Condition when First Seen.—The patient was extremely emaciated, had been confined to bed for some weeks, and subsisted entirely on milk. No other food of any kind could be tolerated, and even with milk alone she occasionally vomited a large quantity of fluid. The stomach appeared to be much dilated, reaching nearly to the pubes, and peristaltic waves could be seen passing across it from left to right. In the umbilical region was a mass larger than one's fist, which appeared to be closely attached to the stomach, it was firm, rather lobulated and tender, the mass moved with some freedom in the lateral but only slightly in the vertical direction; the patient was extremely anaemic and weighed only 4 st. 9½ lb. The vomit and the motions were free from blood. The long-continued history, the mobility of the stomach tumour, and the absence of cachexia such as is associated with advanced malignant growth, led me to believe that I had to deal with a case of chronic ulcer with massive inflammatory thickening around, and I proposed gastro-jejunostomy for the relief of the condition.

Operation.—On opening the abdomen on October 26th, 1903, the large mass felt through the parietes was found to occupy that portion of the stomach near to but not involving the pylorus, the tumour was pinkish in colour, as from inflammatory injection, and it was markedly oedematous. A posterior anastomosis was quickly made with Murphy's button as the pulse was very feeble and quick, running up to as high as 120.

After-history.—This was entirely uneventful, the patient was never sick, the tumour mass shrank rapidly appearing by the eighth day to be reduced to about half its former size; on the twentieth day the patient's weight had increased 9 lb., and she left the hospital on the twenty-third day after, taking solid food. Since that time she has continued to thrive, can do her household work, and has gone up in weight from 4 st. 9½ lb. to 8 st. 3½ lb.

CASE V. Perforation of Gastric Ulcer: Excision of Ulcer: Recovery: Recurrence of Stomach Symptoms: Pyloric Stenosis Found: Posterior Gastro-jejunostomy: Recovery.

History.—B. P., aged 24 years, was sent to me by Dr. Mary Hamilton-Williams, and was admitted to the General Hospital on January 6th, 1904. In March, 1902, she had been treated at the Liverpool Infirmary by Mr. Hamilton for a perforated ulcer on the anterior wall of the stomach; the ulcer was excised. Prior to that she had suffered from indigestion for seven years, with periodical attacks of vomiting, and at times haematemesis. Following the operation just mentioned the patient had a period of comfortable digestion which lasted a few months, then the old pain began to return, and vomiting a little later, whilst on three occasions blood was vomited, the last time being about three months ago. The pain came on very soon after taking food, and was generally relieved by vomiting.

Condition on Admission.—The patient was anaemic but well nourished: the bowels were constipated: the period was irregular. There was no evident dilatation of the stomach; no definite thickening could be felt in it, but there was some degree of tenderness all over the upper zone of the abdomen. Milk could be taken as a diet with freedom from pain and vomiting, if the patient was absolutely recumbent, but if she resumed active habits even milk gave rise to pain and vomiting; if she remained in bed, no other food but milk was tolerated.

Operation.—On January 18th, 1904, posterior gastro-jejunostomy was performed with difficulty owing to the very widespread adhesions from the old perforation. Only a small area of the posterior surface of the stomach could be exposed—too little to allow of safe suturing and a sufficiently large anastomotic opening, so the union was made by a 1 in. Murphy button. The pylorus was so narrow as only to admit the tip of the little finger; whether an active ulcer existed in any part of the stomach it was impossible to determine, but none was felt.

After-history.—An easy recovery followed; the patient vomited about 2 oz. of watery fluid the day after operation, and not again; the button was passed on the sixteenth day, and on the twenty-third day the patient was discharged from hospital, taking practically an ordinary diet, and free from all discomfort.

CASE VI. Duodenal Ulcer: Gastro-jejunostomy: Complete Relief to Pain and Bleeding.

History.—J. M., aged 32, was sent to me by Dr. Martland of Walsall, and was admitted to the General Hospital on January 20th, 1904, complaining of severe and persistent pain in his back, of vomiting, and loss of weight. The history extended over about six years, although four years earlier still vomiting of blood had given rise to a suspicion of gastric ulcer. In the earlier part of this time the symptoms were intermittent and the patient was generally able to work, but for some months prior to admission he had been much worse, especially in regard to pain, and had been entirely disabled from work.

Condition when First Seen.—The pain was experienced chiefly to the right of the lumbar spine, passing occasionally round to the umbilicus; it was often worse when lying down. To the right of and some 2 in. above the umbilicus there was a persistently tender spot, but no tumour was palpable nor was there any unusual pulsation. The urine was normal, as was the function of micturition; there was nothing in the history suggestive of biliary colic; the patient had never been jaundiced. Vomiting occurred at irregular intervals and gave some relief to the pain, but the pain and vomiting appeared to be independent of food taking. The patient denied any haematemesis for some years, but the guaiacum test showed the presence of blood in the vomited

matters, and examination of the stools showed that a considerable quantity of blood escaped by the bowel. The patient was very anaemic; he was neurasthenic, and presented the appearance of a man who was gravely ill; morphine was required at night to procure any rest.

Operation.—Duodenal ulcer was diagnosed, and at the operation a dense thickening over an area of about an inch in diameter was felt in the second portion of the duodenum mainly in the posterior surface, but encroaching somewhat on the outer wall. Posterior gastro-jejunostomy was performed.

After-history.—An absolutely uneventful recovery has followed, entirely free from regurgitant vomiting. Pain has been entirely absent except on one occasion after an indiscreet meal; no morphine has been required, and there has been no further loss of blood by the bowel. At the end of nineteen days the patient was up and about in the ward taking the ordinary house diet; he was discharged apparently well on February 18th, and has since been in excellent health.

ACUTE INTESTINAL OBSTRUCTION CAUSED BY SYPHILITIC ULCERATION IN THE ILEUM.

By JOHN M. ELDER, M.D., C.M.,

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E. L., aged 23, labourer, was admitted to the ophthalmological department of the Montreal General Hospital on August 20th, 1903, suffering from extensive ulceration of the left upper eyelid. This trouble, he stated, began about one month prior to admission in the form of a small, painless papule on the lid, which so rapidly increased in size that the surrounding swelling of the lid prevented him from opening the eye. The affected area on the summit of the lid then broke down, forming a spreading painless ulcer, which showed no disposition to yield to topical healing remedies.

State on Admission.—The patient, a fairly well-nourished young man, not markedly anaemic, showed three ulcerating patches, almost coalescing, on the left upper eyelid, one about the centre of the lid, ¼ in. above and parallel to the ciliary margin, 1 in. long and about ¼ in. wide. The second, near the outer canthus, was circular, and about ½ in. in diameter. The third was at the inner canthus, somewhat smaller and elongated. All three were depressed, had sharp, punched-out edges, with unhealthy bases and absence of granulations. The skin of the upper lid was congested, but there did not appear to be any tendency to infiltration. The skin of the lower lid was unhealthy looking, and at the outer side of the eye there was a well-marked conjunctivitis.

Abdominal Attack.—A few hours after his admission to the hospital he developed acute abdominal symptoms, the first thing noticed being a sharp intermittent pain at the umbilicus coming on half an hour after a stool. He next felt nauseated, but could not vomit. Rectal tenesmus was persistent. He passed urine normally. The pain became continuous, and as the abdomen was becoming markedly distended and rigid, and the patient's general condition one of collapse, I was sent for in the night to see him. I found him very depressed and mentally dull, with shallow breathing, rapid pulse, and subnormal temperature (97°F.). The abdomen was moderately distended, rather more about the umbilical region than elsewhere; marked rigidity of abdominal muscles, especially in the epigastric region, but tenderness only to a moderate degree, and with no point of maximum tenderness. There was no vomiting, but occasional hicough. I got the history as given above, and was assured by the medical superintendent that the patient was hourly growing worse, as indeed I saw for myself. A careful urinalysis gave us no clue to the condition. I therefore determined upon an exploratory laparotomy as the only means of clearing up the diagnosis, and of possibly saving the patient's life.

Operation.—He was taken at once to the operating room, where, under ether anaesthesia, the abdomen was opened by a 3 in. median incision, below the umbilicus. In the peritoneal cavity was a moderate amount of turbid, yellowish, odourless sero-purulent fluid, in which floated a number of large jelly-like pieces of fibrin. The peritoneum was injected, but no ulcerating areas could be seen. The ileo-caecal valve being found, the colon, caecum, and adjacent part of the ileum were found collapsed and the appendix normal. This showed that the obstruction was higher up and in the small bowel. On tracing up the collapsed ileum no enlarged gland or Peyer's patches or other evidences of inflammatory processes were noticed. At a point about two and a-half feet from the ileo-caecal valve the gut was bound down to the posterior layer of the peritoneum, and it was with some difficulty that these adhesions were separated and the ileum delivered through the incision. It was then seen that at this point the omentum, firmly adherent to the bowel in fully two-thirds of its circumference, grasped it like a band. This was evidently the site of obstruction, as the bowel above, markedly distended, overhung the constricting ring. The bowel above this point, for a considerable distance, looked very dark, and evidently contained blood. The omentum was carefully separated from the underlying bowel, to which it was attached by firm, old adhesions. But the separation of the adherent omentum in no wise freed the passage through the bowel, which was here completely obstructed by a firm nodular mass in its lumen. I accordingly proceeded to resect this part of the bowel, along with about 3 in. below it, which looked discoloured and unhealthy. We found, as we expected, that the bowel above the

constriction, was filled with quite recent blood. An end-to-end enterorrhaphy, with catgut suture, was done, and the bowel replaced; the abdomen was well irrigated with hot saline solution, and a large rubber drainage tube passed down into the pelvis, the abdominal wound closed around the tube, layer by layer, and patient given a rectal saline with brandy, and sent to the surgical ward. On examining the resected portion of intestine, it was found that subjacent to the mesenteric attachment there was an old ulcer, showing loss of tissue of the mucosa, but without evidence of surrounding inflammation, and not involving the underlying muscular coats of the bowel. Opposite to this ulcer was a small abrasion in the mucosa, showing evidence of recent haemorrhage from some small vessel there, and this blood had dissected up between the mucosa and muscularis, causing a haematoma, opposite the ulcer, sufficient to quite obstruct the lumen of the gut at this point. Beyond the obstruction the blood was escaping into the proximal part of the bowel, where it was observed before resection. Cultures of the free fluid in the peritoneal cavity shewed *B. coli* infection. The pathologist's report of the specimen is as follows: "On mesenteric border of portion of small intestine removed, the mucosa is atrophied and tissues contracted at base of cicatrizing ulcer. Opposite mesenteric border is a haematoma beneath the mucosa. Underneath the area of atrophied mucosa is an effusion of blood. Lumen of bowel is filled with a blood clot. Mesenteric arteries show extensive sclerotic changes."

Result.—The patient made an uninterrupted recovery after the operation, the bowels acting the day following operation and regularly thereafter. He left the hospital in twenty-two days, is now at his work, and has regained his normal weight.

Remarks.—Clinically, this case was a rather unique and most interesting study to me, and before saying anything about the literature bearing on it I wish to refer shortly to the history. Here was a young man, with no history of venereal infection, it is true, who developed a typical tertiary ulcer on the eyelid. This chronic ulcer subsequently healed quickly and completely under mercurial inunctions (which were begun two days after operation), combined with pot. iod. grs. xv-xxx t.i.d., though locally it was not treated, except by an ordinary boracic compress. The ulcer in the bowel presented similar syphilitic characters, and we had evidence, microscopically, of an endarteritis, which, in a man of 23, with such an associated skin lesion, was presumably also syphilitic. The possibility of typhoid ulceration was thought of, but against that was the absence of other symptoms, the absence of the Widal reaction (for which we tried several times), and the position of the ulcer (at, and not opposite to, the mesenteric attachment). All these considerations, in conjunction with a typical tertiary skin lesion, yielding readily to antisiphilitic remedies, makes the diagnosis of syphilitic ulcer of the small bowel almost certain.

As I afterwards ascertained from the patient, there was a history of obscure abdominal symptoms for some time before admission to the hospital. He had noticed "pains in the stomach after eating" for a month previous, but he had had no vomiting nor had he lost flesh. He had also alternations of diarrhoea and constipation for about the same time, but never severe enough to interfere with his work. It would seem, therefore, that though the haemorrhage had produced the complete obstruction, he had doubtless previously suffered somewhat from the intestinal ulcer. He is still under appropriate antisiphilitic treatment.

The surgical literature on this subject is, so far as I have been able to examine it, very scanty. Many textbooks on surgery say nothing about the subject at all. Treves, in his work on *Intestinal Obstruction* says: "Excluding the rectum, syphilitic ulcers of the bowel are rare. They may be met with in any part of the intestine, but according to Rieder¹ are most common in the upper part of the lesser bowel..... It is said that syphilitic ulcers produce stenosis of the bowels. If any deductions can be drawn from the effects of tertiary syphilitic ulceration of the rectum this can be quite well understood. There is no doubt that a gumma in the wall of the gut may lead to a stricture without causing any ulceration of the mucous membrane."²

In that most excellent *Manual of Surgical Treatment* lately published by Messrs. Watson Cheyne and Burnhard, the reference reads (vol. vi, p. 352): "Syphilitic ulceration leading to stricture is very rare in any part of the intestinal tract except the lower part of the rectum." Rose and Carless³ state that "stenosis of the small intestine due to cicatricial stricture may arise from syphilitic disease, and may long remain chronic or almost unnoticed until some intercurrent condition produces complete obstruction." But no special stress is laid on the subject, and no case is cited.

The *American Textbook of Surgery* dismisses the subject curtly thus: "Syphilis of the intestinal tract in the adult has little interest for the surgeon" (p. 166). Similarly, even from a pathological point of view, I think we may safely say

that syphilis of the intestinal tract is a comparatively rare condition, and, as Treves says, is generally seen in the rectum and colon. Oberndorfer has collected 25 cases of congenital and 24 cases of acquired disease showing lesions in the intestinal tract. Fournier is mentioned as having found about a dozen cases.

Oberndorfer in his 25 cases of congenital lues reports as to the site of trouble in the intestine: jejunum, 9 cases; near ileo-caecal valve, 3 cases; colon, 6 cases.

Thoma recognizes the four following conditions which may be found in any organ as the result of syphilis: (1) Simple hyperaemia, with a few clumps of lymphoid cells in the region of the smaller blood vessels. (2) Exudate; this may be rich or poor in cells, and is usually accompanied by changes in the walls of the capillaries and smaller arteries. (3) Dense round-celled infiltration, together with formation of new connective tissue on the one hand and degeneration on the other, resulting frequently in superficial or deep ulcers. Dense scar tissue formed from the above-mentioned new connective tissue. Jurgens differentiates the syphilitic lesions of the intestine into three classes: (1) Superficial lesions; these usually show fatty and necrotic changes, and occur most frequently near the ileo-caecal valve. (2) Gumma. (3) Eruption of miliary nodules in the mucosa, serosa, and muscularis. The nodules closely resemble tubercles, but are distinctly yellow. Lochte found these in a necropsy of a case of congenital syphilis where other lesions made the diagnosis certain.

In children dying from congenital syphilis the intestines frequently show circumscribed or circular areas of hyperaemia, also patches of infiltration or definite ulcers. Scar tissue is found in rare instances. Exudates and adhesions in the peritoneum are found.

In acquired syphilis the same anatomical picture is presented with certain peculiarities. There is a marked tendency to the formation of nodules or girdles of infiltrated tissue, or else ulceration. The ulcers are usually flat, starting in the submucosa, and soon followed by loss of the epithelium. Their depth varies, perforation being not uncommon, resulting in local abscess or general peritonitis. In 35 cases of acquired disease there were 7 perforations. At least one such case has been seen in the congenital form.

On the other hand, the ulcer may heal with the formation of scar tissue and consequent stenosis. This has been seen in 7 cases, in 4 of which the intestine above the stricture was distinctly dilated.

The prognosis of this disease may be judged from the fact that a fifth of the cases die from perforative peritonitis, another fifth suffer from multiple intestinal stenoses, and a certain percentage have repeated intestinal haemorrhages. Involvement of the intestine is a very severe complication in syphilis.

As to the therapy, mercury and the iodides are, of course, indicated for the general condition. The haemorrhages should be treated by absolute rest and opium. Perforative peritonitis and stricture should be dealt with according to the general principles of surgery. These are a few extracts from a very full discussion on this subject, with excellent bibliography, in an article by Dr. A. Weiss, in the *Centralblatt für die Grenzgebiete der Medicin und Chirurgie*, August, 1902, which should be read by any one interested in this subject.

REFERENCES.

- ¹ Ann. Univ. Med. Sci., vol. 1, 1893, p. 31. ² Intestinal Obstruction, p. 208.
³ Manual of Surgery, p. 861.

SOME CASES OF INTESTINAL OBSTRUCTION SUCCESSFULLY TREATED.

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THE following paper is a sequel to a communication which I made last year to a society, entitled *Some Fatal Cases of Intestinal Obstruction*. In the discussion that followed the desire was expressed that on a future occasion I should bring forward those cases in which more success attended my efforts. This, then, is my apology for dealing with a subject that many will say is already worn threadbare.

For convenience I have arranged the cases as far as possible into groups.

CASE I.

Case I was that of a man aged 48 years who was introduced into the