lated; (b) that the operation must be performed early; (c) that the risk which the operation involves is so comparatively small that it cannot be justifiably urged as a ground for delay.

Secondly, the case is of value because it illustrates and emphasises the fact that symptoms which till recently have been ascribed to peritonitis often depend on what may be called "secondary obstruction"—that is, on obstruction due to the paralysed condition of the gut at the point of injury. The recognition of this fact constitutes one of the most important advances that have lately been made in respect to cases of internal strangulation.

The mode of onset of the attack, and the symptoms observed in the first two or three days of the patient's illness, were of doubtful interpretation. The sudden onset of severe pain that followed the action of the bowels and the development of sickness were strongly suggestive of mechanical obstruction, but their meaning was obscured by the fact that flatus was freely passed, and that there was scarcely any distension or tympanites. Evidently if obstruction was present it was not complete. Another feature that increased the uncertainty of the case was that the patient, for the first two or three days, had the appearance of being in almost her usual health.

These apparently conflicting symptoms were explained and reconciled at the operation. There had been little distension, but persistent sickness, because the obstruction was in the small intestine—I think it was as high as the middle of the jejunum. The patient did not look pinched or collapsed, and flatus was still passed, because the opening through which the gut had slipped was placed in the mesentery, where that structure was too thin and membranous to produce complete obstruction, or even at first to cause any serious injury to the intestinal wall. But in the course of three or four days the continuance of sickness, the fact that no faeces were passed, the appearance of distinct though still moderate tympanites, and the gradually increasing distress of the patient forced the conclusion that mechanical obstruction must be present.

The operation itself was easily performed, as there was only slight distension of the intestine. It is now well understood that the state of the intestine in this respect is one of the most important points in regard to laparotomy for obstruction. Distension adds greatly to the difficulty of every stage of the operation. So far is this the case that in any instance of obstruction the amount of tympanites must always be taken fully into account. Few recoveries take place when it is considerable, and in any case in which operative interference is contemplated the increase of tympanites ought to be regarded as a warning against further delay.

I have had several opportunities of testing the value of searching for the obstruction, not by introducing the hand, but by taking the loop that first presents in the wound, and tracing it onward by drawing out three or four inches for examination and then returning them, so that no more than six inches are ever out of the wound at the same time. In this way the intestine may be traced upwards towards the duodenum, or downwards towards the ileum, till the obstruction is reached, with very little delay, and with no danger if the manipulation is gentle. If, having traced the gut up to the duodenum or down to the ileum—for he cannot tell with certainty in which direction he is travelling—he has found no obstruction, the operator must trace his way in the opposite direction, taking, however, very great care that he does not drop the loop and so break the continuity of his examination.

To relieve her as soon as possible from the discomfort and danger of gaseous distension, I availed myself of the practice recommended by ovariologists, of raising the patient's shoulders, so that she could the more easily expel flatus from the mouth; and I also introduced a soft tube about six inches into the rectum. Through this, for some hours, flatus continued to escape, to the great comfort of the patient. Both these expedients for removing gas from the intestinal canal should, I think, be adopted in cases of this kind.

The favourable manner in which she bore the operation was remarkable. When I saw her, about six hours afterwards, her pulse was 84, her temperature was normal, and she showed but small traces either of the operation, or of her previous illness.

The return of sickness on the third day after the operation, and the manner in which it was treated, deserve careful observation. It was due, I think there can be no question, to the fact that the piece of intestine that had been partially strangulated was still paralysed, so that the fecal material that was passed into it from above lodged, and so renewed the obstruction. It then became a question whether the intestine would recover its peristaltic

action, and so overcome the obstruction, or whether the obstruction would persist till death occurred from vomiting and exhaustion. It was when the patient's life was thus in the balance that the enema was given, in the hope that it might be the means—by unloading the lower bowel, reducing distension, and indirectly stimulating the flaccid piece of intestine into action—of restoring the patency of the canal. Fortunately this result was attained, and all the symptoms of obstruction disappeared, and did not return. When sickness, coupled as it is so likely to be, with increasing distension, returns in cases of this kind, three courses present themselves: 1. To give an enema; 2, to give an aperient by the mouth; 3, to fasten a distended loop of small intestine to the edges of the abdominal wound and open it. In the present instance the enema secured all that was required, and put an entirely new aspect on the case. Mr. Lawson Tait and others have shown the excellent result that may follow the use of aperients in intestinal distension following some cases of abdominal section, not directly involving the intestine. Aperients, however, must obviously be used with very great caution when obstruction depends on paralysis of the intestine after strangulation, for the condition of the gut at the seat of injury must be a matter of doubt, and the action of an aperient might be followed by perforation. To open the small intestine in the abdominal wound is a step that will avert death in some cases, and the damaged condition of the gut at the point of strangulation and the necessity for immediate relief from obstruction may fully justify its adoption. But it has some serious drawbacks. The patient is generally so exhausted that an anæsthetic, and the sickness which it may provoke, the reopening of the wound, and the necessary disturbance and exposure are each a source of danger. And there is also the highly important question whether, in the exhausted condition of the patient, and in the presence of vomiting, should this continue, safe union will take place between the intestine and the abdominal wall, so that there shall be no escape of faeces into the peritoneal cavity. There is the further point that we are unable to say what part of the intestine will present at the wound, and, therefore, that we cannot be sure that the opening may not be so high up as seriously to interfere with general nutrition. Which of the three alternatives should be adopted must depend on the circumstances of each case; but there is reason to hope that the timely use of an enema, when the symptoms of obstruction return after laparotomy, will often have a valuable effect—at least, it should be tried before anything more serious is undertaken.

When, in consequence of the weakly condition of the patient, the distension of the abdomen, and the retraction of the edges of the wound, the latter reopened, a coil of the small intestine was exposed over an area of nearly six inches in length by two in width. But no harm followed, for the peritoneum covering the gut had become united with that lining the abdominal wall, and the peritoneal cavity was safely shut off. In two other cases I have met with the same condition. In both, as in this instance, the wound gradually closed, and no intestinal protrusion occurred.

It was apparent at one time that the patient was suffering severely from the want of food. She wasted rapidly, complained of intense thirst, and was so prostrate that she could not move even her legs without assistance; her pulse was weak and thready, her face deeply wrinkled, her eyes dull, and her conjunctivæ congested. But the danger in this direction had to be incurred, for when she was allowed food by the mouth sickness at once returned, and would have been quickly fatal to her. The inability to take food by the mouth persisted till the ninth day after the operation.

JEJUNAL ENTERECTOMY FOR THE CLOSURE OF AN ARTIFICIAL ANUS OF EIGHTEEN MONTHS' STANDING: RECOVERY.

By THOMAS SINCLAIR, M.D., F.R.C.S. ENG.,
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THERE appears to be less hesitation in adopting the relatively severe measure of resection of the bowel in the treatment of abnormal intestinal openings than prevailed some time ago. Doubtless some of these conditions yield to simpler plans, such as pad and bandage, plastic operations of various kinds, the use of enterotome clamps and the like, but we have too

many opportunities of proving their inadequacy, not to mention the positive risks attending the employment of some of these means, particularly those last alluded to. Moreover, the anatomical relations are not so uniform in a series of cases as to admit of a routine treatment, some inviting the clamp method, others, without a pronounced *eperon*, contra-indicating resort to it. Frequently also plastic operations, involving transplantations, are attempted under circumstances that offer little or no prospect of success. The following case is illustrative of some of these points, enterectomy being resorted to after failure of the pad and bandage and plaster plans to effect a closure.

The subject was a farm labourer, aged 60 years, who stated that eighteen months prior to his admission to the Royal Hospital, Belfast he had been acutely ill for some days with a groin swelling. The swelling burst; something black escaped, after which the intestinal contents issued freely. Evidently there had been sloughing of a femoral hernia of the right side at this date. Shortly thereafter, according to the patient, the opening showed an inclination to close under the treatment of his previous medical advisers, but latterly had become much larger in spite of this treatment. A considerable quantity of the chyme now flowed from it, more especially when he was not recumbent. Being high up in the alimentary canal this resulted in the loss of much flesh and strength. As it was growing rapidly worse, and as he was quite unfit for work, he was anxious to have some operation done for its cure. Although a moderate amount of feces passed by the normal channel, an examination of the parts was unfavourable to the adoption of the milder measures. A plastic operation was impracticable, from the very dense cicatricial puckering extending widely around the opening, so dense that the spermatic cord and Poupart's ligament could not be felt in it. A large projection from the anterior lip of the proximal bowel, which could not be repressed, offered another obstacle. Dupuytren's plan by the enterotome clamp was unsuitable, from the want of a safe spur, the flexion of the bowel being only moderately acute. Simple enterorrhaphy, after liberation of the coil from its parietal adhesions and paring of the edges of the opening, suggested itself; but the opening involved more than two-thirds of the circumference of the gut, hence enterorrhaphy would have nearly obliterated the lumen of the gut. Enterectomy remained as the only open course.

Rest in bed for more than a week, with a castor-oil purge every third day, an enema on the evening before and another on the morning of the operation formed the preparatory course. A three and a half inch incision through the artificial anus along Poupart's ligament, with a circular dissection gradually deepened round the opening, was the first step. The spermatic cord was disentangled with much difficulty from the hard cicatricial mass, but the deep epigastric artery was so engaged in it, and so much in the way, that it was double-ligatured and divided. Poupart's ligament and the deep crural arch were also cut before the intestine could be liberated from its intimate connection with these parts. This separation of the bowel, conducted with a view to injure it as little as possible, was tedious, bloody, and difficult. Drawing the coil out upon the thigh, the abdominal wound was plugged with aseptic sponges, and the removal of the segment of bowel proceeded with on the lines recommended by Sir William Mac Cormac in his masterly oration on Abdominal Section for the Treatment of Intra-peritoneal Injury. The intestine was clamped above and below with pieces of drainage-tube held by Wells's forceps, a simple plan which answered very well. Scissors were used for the section, the bowel being cut obliquely to its axis, so as to remove three inches from the concavity, and four and a half from the convexity. This oblique section involved the ligature of ten arteries in the edge of the section. The mesentery was divided close to the gut by successive snips, ten arteries requiring ligatures were tied, and the edges of the mesentery, none of which was cut away, were stitched together. Next, two fine stitches on either side were so introduced as to exclude the nearest uncut terminal arteries, into the sides of the mesenteric triangle near its base, in order to bring them together, and cover as far as possible that part of the gut uncovered by peritoneum. By this means two of the three most important intestinal stitches became capable of insertion by Lembert's method; only the central one was a muscular coat suture merely, and this was much buried by its two immediate neighbours, turning the serous coat well inwards at a point where otherwise this is difficult to accomplish. Two dozen Lembert's stitches were introduced in one row, at intervals of two lines, no stitch being tightened till

all were passed. Ordinary cambric needles were used, and fine carbolised silk for all sutures and ligatures. The edges of the pucker in the mesentery, now folded and redundant, were brought together by a few points of suture, the more efficiently to support the intestinal sutures at this critical spot. Everything having been well flushed with warm boracic lotion, the coil was reduced, and the parietal wound closed as far as practicable by silver sutures, a drainage-tube being left in its superficial part, but not reaching into the abdominal cavity. Iodoform, salicylic wool, and an elastic roller completed the dressing.

The operation occupied upwards of two hours, and the ether was so managed that one ounce sufficed for the whole operation. Having regard to the fact that the enterectomy involved a portion of the jejunum, which, from the great number and depth of the valvula conniventes was judged to be a portion situated high up in this part of the alimentary canal, the after-treatment was carried out with much caution. Opium, to the extent of fifteen minims of the tincture thrice in the twenty-four hours, was given to minimise peristalsis and intestinal secretion for the first eight days. At no time was it pushed so far as to affect the pupils. Indeed there was no other indication for its employment but that alluded to.

Anything likely to escape complete digestion in the stomach and to excite pancreatic and intestinal activity was withheld as long as possible. Even simple fluids were given in sips, and thirst attended to chiefly by tepid water injections into the rectum. The only things given by the mouth for the first eight days were sips of water, kali water with spirits, and tea without milk. During this time four nutrient enemata, consisting of four ounces of pancreatised milk with two spoonfuls of Brand's essence, were administered on each of the first three days. For the next four days pancreatised beef-tea and pancreatised milk enemata, six to eight ounces each, were given alternately, four during each day. For two more days rectal feeding, in the form of predigested beef suppositories, was continued; but plenty of milk-whey and tea were now given by the mouth, and some lemon juice. On the tenth day after a spontaneous action of the bowels, pancreatised beef-tea and milk were given by the mouth, and rectal alimentation was abandoned. On the following two days, toast, butter, fish, milk, and beef-tea were allowed, and after the fourteenth ordinary meals. Flatus had passed *per anum* freely from the second day forward, and on the tenth the bowels acted of themselves, an event which synchronised with the only febrile temperature (100.4° F.) recorded throughout.

The dressings were removed for the first time on the sixth day, when the incision was found united by first intention, and the silver sutures and drain-tube were withdrawn. The central portion, corresponding to the artificial anus, the edges of which had been refreshed at the operation, subsequently granulated, and was closed before the end of the month. On account of the dense contraction here it was not possible to expedite this closure by suture or plastic operation. The patient rose upon the twenty-second and was discharged on the twenty-eighth day, the parietal wound having closed and the bowels having regained their natural function.

Mr. A. E. J. Barker, in a very interesting communication to the JOURNAL of March 17th upon Laparotomy for Penetrating Gunshot Wound of the Abdomen, has shown by the *post-mortem* examination of one of his cases treated by enterectomy that six days suffice for sound union between the ends of the gut. Possibly a shorter abstinence from food by the mouth than ten days in the present instance would, in the light of this observation, have been sufficient; but the adequacy of rectal alimentation was so pronounced that hunger was not complained of by the patient during this interval. Though quite willing to feed him by the mouth at the end of the first week, it appeared judicious to wait a few days, until either some urgency on the patient's part or some change in his general condition demanded more thoroughgoing nourishment. Mr. Greig-Smith justly remarks in his work upon *Abdominal Surgery*, "under the best form of rectal alimentation yet devised the patient steadily loses ground." Nevertheless one could not have observed the after-course of this case without admitting that the value of rectal feeding was considerable. The patient certainly lost flesh, but the healthy behaviour of the wound and comparative freedom from hunger attested the value of predigested nutrient enemata.

The other noteworthy features in this instance are: the sufficiency of a single row of Lembert's sutures of silk, and the treatment of the mesentery. No triangular segment of mesentery was

excised, and much care was taken to narrow the space between its layers, where it joins the intestine, so as to secure as perfect coaptation of the serous layers at this spot as possible.

CLINICAL MEMORANDA.

FUGITIVE IODISM: OEDEMA OF EYELIDS.

W. J. H., aged 30, on May 7th complained of frontal neuralgic headache, which had varied in intensity during the preceding ten days. He could not bring to mind having had headache before, but had been, during several years, inconvenienced by an irritable catarrhal condition of his fauces and naso-pharynx. Having applied a chloroform preparation of aconite root with a camel hair pencil horizontally to the forehead from side to side, a full inch above the eyebrows, I prescribed as follows:—R Liq. ferri iodidi, ℥ij; aq. ℥vj; ℥j ter. Soon after the second dose the patient felt a severe cold had come upon him quite suddenly—sneezing, a very copious and steady flow of watery fluid from the left nostril, sufficient to saturate two handkerchiefs. This ceased in one hour as abruptly as it had occurred. Coincident with its cessation a puffiness of the eyelids on the corresponding side ensued; this increased, and on retiring the patient's lids were completely closed. He slept well, and the morning following his eye presented the appearance of having been stung by an insect, as described by Dr. Tom Robinson. The left eyelids, both upper and lower, were equally tumid with a semi-transparent rosy fulness, which the patient said was less than on retiring the night before. There was neither subconjunctival oedema nor any discharge from between the lids. The conjunctiva presented a diffuse pinkness. Over both cheeks, but nowhere else on the body, was an urticarial erythema, fainter on the left than on the right cheek. He felt well; his headache had gone. On May 10th, the phenomena had completely vanished.

REMARKS.—Here is seen a person with a decided catarrhal dyscrasia suddenly attacked with fugitive oedema of the eyelids sequent upon a free catarrhal outpour from the nasal mucous membrane. So far, the symptoms being limited strictly to the one side lends weight to the idea that an extension of the same catarrhal process into the neighbouring loose connective tissue, though this was not related by immediate continuity, had occurred. Another view may be taken; that the transient oedema of the lids was associated with an impediment in the course of the efferent lymphatic circulation occasioned by the turgidity of the nasal mucous membrane.

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EXCESSIVE THIRST A SYMPTOM OF MALIGNANT DISEASE.

In a case of malignant disease which came under my care lately, certain symptoms were present which seemed rather difficult of explanation, and may I think be considered unusual. The case was briefly as follows. About three months before her death I was called to see a woman, aged about 50, who had been suffering from dyspeptic symptoms for about five months previously. At this time she complained of pain, nausea, vomiting, and other symptoms of gastric derangement. A tumour was to be felt in the epigastric and right hypochondriac regions, evidently involving the liver and intestines. The case ran a rapid course. About three weeks before death, the most extraordinary thirst came on which nothing could appease. It used to come on in paroxysms, and although her friends tried to keep too much fluid from her, she would clutch wildly at any vessel, and pray for more. Her husband used to say to me, "Her thirst is terrible, surely there must be some great heat in her." I may say that what she drank used almost all to come back again. Constipation, which was troublesome all along, became absolute for the last ten days, evidently from pressure of the tumour on the gut. There was no increase in urinary secretion or febrile symptoms.

Brecon.

W. R. RICE, M.B.Dub.

SURGICAL MEMORANDA.

ON THE TREATMENT OF SEBACEOUS TUMOURS.

MANY people, the subjects of congenital sebaceous tumours and "wens," object to having them removed, on the score that the remedy is worse than the disease, and the after-consequences may be serious.

The following is the method I have adopted in such cases, and with marked success. With a cataract knife (Graefe's) puncture the cyst, and gently squeeze out the contents; then introduce a very small piece of nitrate of silver. On the following day, by means of a pair of forceps, the capsule of the cyst can be withdrawn, just like the shell of a bean, without any portion being left adherent. In no case has there ever been any return of the growth or any ill effects.

The method, if tried, will be found to have many advantages apart from its simplicity and thoroughness.

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T. MURRAY ROBERTSON, M.D. Edin.

PERICHONDRITIS OF THE LARYNX: TRACHEOTOMY: RECOVERY.

THE following particulars of a case which occurred in my practice eight years ago may be of some practical interest at the present time.

R. W., aged 30, pointsman on a railway, consulted me for a troublesome hoarse cough, attended with difficulty in breathing. He had all the symptoms of a severe attack of laryngeal catarrh, and was treated by poultices and counter-irritation, together with the usual remedies and inhalations. The case continued to get worse, the difficulty of breathing increased, and the patient could only articulate in a whisper. On laryngoscopic examination of the larynx, it was found red, swollen, and ulcerated. There was also thickening and tenderness externally. He was now put on large doses of perchloride of mercury, with iodide of potassium and cinchona, at the same time keeping the patient in a warm atmosphere, inhalations being continued. The patient still continued to get worse, and Dr., now Sir Walter Foster saw the patient in consultation with me; he advised the continuance of the treatment, but to be in readiness to perform tracheotomy should the symptoms of dyspnoea increase. The patient got worse, and on the following morning at 5 A.M., I found him so bad, and suffocation impending, that I immediately, with the aid of my then assistant, Mr. Welch, opened the trachea and inserted the tube. The result was immediate relief of the patient's suffering; from being cyanosed he recovered full power of breathing, and became calm and natural in colour. I kept him in a warm atmosphere, with hot sponges constantly applied over the orifice of the tube, and continued the medicinal treatment as before.

The case went on well, the cough gradually lessened, the thickening of the larynx and ulceration subsided. Later on a piece of exfoliated cartilage was coughed up and the expectoration daily diminished, and at the end of one month from the operation, I deemed it advisable to make an attempt to do without the tube. I first experimented by removing it for a few hours, keeping him under close observation the whole time; finding he seemed no worse, I continued to let him remain without it, and at the expiration of a month from the removal of the cannula, the external wound had healed, and the patient continued to breathe quite freely.

The patient is still alive and has had no return of the disease, and but for some feebleness of voice is quite well.

REMARKS.—The success of this case appeared to me to be due to the removal of the cannula at the time when the larynx had so far recovered as to enable the patient to breathe fairly well without it, as the presence of it, acting as a foreign body, seemed to set up some irritation in the trachea, causing exuberant granulations to appear around the orifice of the wound.

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URTICARIA DIFFUSA VEL FEBRILIS OCCURRING AFTER OVARIOTOMY.

SOME time ago I removed a small ovarian tumour from a young lady, aged 28. The operation was a very simple one, and the wound healed rapidly, all the sutures being removed by the seventh day, and the pulse and temperature being both normal by that date. Late on the following night I received an urgent message saying "that my patient had been taken with vomiting, and was complaining of pain in the back, headache, and sore throat. The temperature had gone up to 101, and the pulse to 120, and a red rash had come out over her face and chest." When I arrived at the house I found the patient in a state of great excitement owing to the nurse in her fright having said something about scarlatina. Her face was flushed, and her neck, shoulders, and body were covered with a bright red rash. She complained