in some, and in others the opening of the intestine as well, has been performed with success.

Mr. Bryant (*Medico-Chirurgical Transactions*, vol. 65) operated successfully in a case of strangulating band; and Mr. Howse (*Guy's Hospital Reports*, third series, vol. xix) has met with like success in a similar case.

Abdominal section and enterotomy, with an artificial anus, was performed six times by the late M. Nélaton, three times successfully (*Gazette des Hôpitaux*, 1862, page 273). Three similar operations have been performed successfully in this country by Mr. Maunder, Mr. McCarthy, and Mr. Wagstaffe.

In the *London Medical Record* for December 1878 are two successful cases of abdominal obstruction and enterotomy for the removal of foreign bodies, quoted by Dr. Studsgaard of Copenhagen; one in his own practice, the other in that of M. Reali of Orvieto. Quite recently, Mr. H. Marsh, in a case of a woman of forty with acute intestinal obstruction, opened the abdominal cavity, and, finding a stricture of the sigmoid flexure, established a false anus by fixing this part of the intestine to the linea alba.

All that I would maintain is that, in certain cases of acute intestinal obstruction, where previous treatment has entirely failed, to open the abdomen is not only justifiable, but imperatively indicated. I know how fatal such operations have been; but I know also that very rarely (I speak of *acute* intestinal obstruction) a case gets well if left to itself. To some, the very recommendation of an operation at all may savour of that rashness which comes of inexperience. I would reply that the very want of success in previous operations is accounted for by the fact that they were too often not performed under those conditions which I am about to point out as being essential to success.

Very briefly, these conditions are the following: 1. The operation of opening the abdomen is only to be performed where certain previous treatment has failed. 2. It is only to be performed antiseptically, so that the risk of septic peritonitis may not be added to the list of dangers against which the patient has already to struggle. 3. But, above all, the operation must be performed earlier than has heretofore been the case. It is hopeless to perform it when symptoms of peritonitis or enteritis have set in. Those who wait, as I venture to say too many have waited, till the abdomen is generally and enormously tympanic—till the temperature is persistently high, or is only falling before the inevitable end—till the pulse is running down and the patient in a condition of irrecoverable collapse; those who wait till any or all of these conditions are present, had far best not operate at all. It is only too easy to foretell the operation that follows. The abdominal cavity is opened readily enough, and then the difficulties begin; coils of enormously distended intestine at once crowd up at the mouth of the incision; the operator has the greatest difficulty in finding a contracted portion, and so of tracing out the point of obstruction; perhaps, during his endeavour to do so, a faecal odour becomes apparent, showing that the intestine has already given way; or, granting that the seat of mischief is found, and the cause of strangulation removed, in spite of all his endeavours the surgeon finds himself with several coils of intestine outside the abdomen, and is at his wits' end to get them in again; perhaps he punctures them with the aspirator-needle; but, owing to the paralysis of the muscular and the infiltration of the cellular coat, which has by this time taken place, the puncture in the mucous coat is not closed, or does not slip away from directly beneath the opening in the serous covering; as the collapsed intestine is returned, liquid feces are seen escaping at three or four points; any attempt to close these points with sutures only makes matters worse, and the patient sinks quickly after his removal from the table.

I have already pointed out the conditions which would guide us as to the time at which an operation, to be successful, must be performed. I will now mention a few points to be observed during the operation itself.* The strength of the solution to be used for spray and sponge must not be above 1 in 40; the solution must be duly warmed. If the operator be obliged to draw any coils out of the abdomen for the purpose of examination, the spray must not be allowed to play upon these coils, which are to be covered with carbolised lint, taking care that the smooth and not the fluffy surface of the lint is in contact with the intestine. If any amount of carbolised solution be believed to have entered the peritoneal cavity, this is to be removed by careful sponging; and finally, in closing the wound, catgut being unreliable, twisted silver sutures are to be employed.

In conclusion, I venture to suggest to you the following points in the treatment of a case of acute intestinal obstruction.

1. From the very first, it is not enough to refrain from giving solid food. The patient is to be fed by enemata, given *per rectum*, and

consisting of milk and egg, wine or brandy, and given carefully twice or three times daily. If possible, only ice out of milk is to be sucked by the mouth.

2. If possible, no opium is to be given, as this drug has a dangerous tendency to mask symptoms; instead of opium, belladonna is to be given, and to be pushed in large doses. Many of those present may remember a paper in the *BRITISH MEDICAL JOURNAL* (August 31st, 1878), by Dr. Norman Kerr, on "Large Doses of Belladonna in Intestinal Obstruction". Five cases are given, somewhat briefly, and therefore incompletely recorded; all got well under the use of belladonna, though in three acute cases, two grains were given every hour, and sixteen, twelve, and fourteen grains were administered in these cases. I do not pretend to explain the benefit of this drug. I admit that its action would seem somewhat contradictory in the one case, as when rubbed into the perineum for spasmodic stricture, appearing to remove spasm; in another, to set up contraction of involuntary muscular fibre. But in a case like the one which I bring before your notice to-night, where a coil has, perhaps by irregular action, slipped under one or more bands, I can imagine that belladonna, if given early and in large doses, may enable the bowel, if this remain empty, by its own contraction to set itself free once more. But on this point I should be grateful for any information.

3. At an early date, the method of abdominal taxis should be made use of. Mr. Hutchinson, in bringing this method forward, recommends that it should be carried out as follows. Under chloroform, a very copious enema of water is to be given by a long tube, and, the anus being kept closed round the tube with a cloth, the fluid should be forced in to the utmost point of distension. Then, simultaneously with the withdrawal of the tube and the escape of the water, the surgeon, with the flat of one hand on each side of the abdomen, should press gently but firmly on alternate sides, in such a way as to facilitate the movements of the coils upon each other. As much of this having been done as shall seem advisable, and the water having flowed out, let the patient (by means of a girth fastened to the bedposts) be raised by the feet till the trunk is inverted; and, whilst the patient is in this position, let the surgeon, with both his hands placed on the lowest part of the abdomen, press the whole mass of the intestines as high up as possible in the abdomen. Of course, during the whole of the time an assistant should carefully watch the effects of the chloroform on the pulse and breathing.

I have only one small alteration to suggest in the above details; and that is, knowing the difficulty of inverting a heavy patient, I think that it will be found better to overturn a chair, so that its sloping back be against the bed; over the chair-back let some clothes be laid, and the patient's body be gradually inverted over this by assistants standing on the bed. This will not only be found easier in the case of a heavy patient, but in that of a female one more decent in the eyes of any friends who may be present.

The above methods failing, I have only to urge an early operation, performed under the conditions already mentioned. It may be said, in answer to this, that recovery may and does ensue sufficiently often to make it worth while to wait. From the cases that I have seen, my own opinion would have been distinctly to the contrary—that, apart from those chronic or subacute instances where a case does well by an intussusception slipping back again or sloughing off; where a long-impacted scybalus or gall-stone passes on, or where a stricture is set free by partial ulceration of itself—that, putting aside such cases as these, acute intestinal obstructions, which have not yielded to such preliminary treatment as that sketched above, will end but in one way if left to themselves. No doubt the justifiability of these operations depends on the probability of a successful result; but hitherto, in nearly every case, the operation has been performed too late to guarantee any such success. For my own part, considering what has been attempted and what has been done in antiseptic surgery, and believing that great advances have yet to be made in the surgery of the abdomen, I trust that I do not assume too much when I say that, in a few years, we shall be able, in cases similar to that brought before you to-night, to promise a successful result with something like certainty.

NOTE ON THE DIAGNOSIS OF INTESTINAL STRICTURE.

By JAMES SAWYER, M.D.Lond., M.R.C.P.,

Physician to the Queen's Hospital, Professor of Materia Medica and Therapeutics in Queen's College, Birmingham, etc.

I AM led, by reading the interesting papers which have lately appeared in the *JOURNAL* on the important subject of intestinal obstruction, to draw attention to a point in diagnosis which I have not seen noticed in recent writings, except by implication, and which I have learned in the course of clinical work. It is this. *The presence of a*

* Similar precautions have been already insisted upon by Mr. Howse (*loc. supra cit.*).

tight stricture of the intestine, so low down as the junction of the sigmoid flexure and the rectum, is compatible with the occasional passage of faecal masses of normal size and shape. Dr. Stephen Mackenzie, in his essay on Annular Stricture of the Intestine, published in the JOURNAL, May 31st, makes the following observation: "The fact that full-sized, properly formed faeces are occasionally passed, of course shows there can be no organic stricture (of the colon)." This statement is directly contrary to my experience. About twelve months ago, I saw an elderly man with Mr. Herbert Bracey of this town. He was suffering from intestinal obstruction. A solid motion which he had recently passed was shown to me; it was of normal shape and size. I was able to reach an annular stricture at the lower extremity of the sigmoid flexure. I sent the man into the Queen's Hospital at once. My colleague, Mr. Furneaux Jordan, performed left lumbar colotomy, if I remember rightly, the day after the patient's admission. The man died in a day or two, and an annular stricture of the intestine was found, at the necropsy, in the position I have indicated. It seems to me that the shape of the faeces, in cases of stricture of the colon or rectum, depends more upon their consistence than upon the size of the stricture. The consistence of the faeces may be such that, although solid, they may be slowly driven through the narrowed gut and subsequently become moulded into a faecal mass of normal circumference in the portion of bowel below the stricture. A case reported by Dr. Walters in the JOURNAL for May 31st illustrates my point. A woman, aged 62, had "annular scirrhus stricture at the junction of the sigmoid flexure and rectum". "Sometimes, the evacuations were not larger than the little finger; at others, large bulky motions would be passed". While the passage of flattened or pipe-stem-like motions is suggestive of stricture near the lower outlet of the bowel, their absence and the passage of faecal masses of normal calibre does not prove the absence of such constriction. I notice that two recent authorities avoid making an unequivocal statement as to invariable narrowing of the faeces in these cases of intestinal stricture. Dr. Bristowe (Reynolds's *System of Medicine*, vol. iii, page 75) writes: "If, however, the obstruction be in the vicinity of the rectum, solid motions generally soon assume a narrow tape-like or pipe-like form." Niemeyer (*Practical Medicine*, American translation, 1873, vol. i, page 568) observed: "In the ordinary forms of constipation, sausage-shaped faeces, of extraordinary size, are often passed; in stricture of the intestine, on the contrary, particularly when seated in the lower part of the intestine, they often have a very small calibre." I see that Dr. Leichtenstern, in his elaborate essay on intestinal obstructions (Ziemssen's *Cyclopaedia*, vol. vii, page 517), is careful to say that flattening, lead-pencil-like shape, etc., of the faeces only occurs in many, he does not say in all, "cases of constriction of the rectum and colon". My proposition is, that stricture in these situations may exist without this alteration in the shape of the alvine evacuations. The converse, that this alteration in shape may occur without stricture, is pointed out by Dr. Leichtenstern and other writers. He says that this change of faecal form may appear in cases of "starvation-intestine", and also in some instances of "violent rectal tenesmus"; but he does not state, as I do, that the passage of a motion of healthy bulk may occur even when there exists serious constriction of the lower part of the bowel, if a sufficient space remain above the anus for the evacuation to become moulded into a normal shape.

TREATMENT OF INTESTINAL OBSTRUCTION BY EXPLORATION OF THE ABDOMEN.

By T. PRIDGIN TEALE, M.A., F.R.C.S.,
Surgeon to the Infirmary, Leeds.

I HAVE read with interest in the JOURNAL of May 31st Mr. Messenger Bradley's address on the "Treatment of Intestinal Obstruction".

From his criticisms I feel convinced that he has not read my original paper in the BRITISH MEDICAL JOURNAL of January 11th, 1879. Had he done so, he would not have said "though six cases are alluded to, the only record which I have of his paper details, and that imperfectly, but one"; whereas I gave four cases at least with details as complete as I deemed necessary for my purpose. In using the word "obstruction" I meant not merely constipation, which may exist for many weeks with impunity, but obstruction to the passage of flatus, which immediately imparts danger to such a case. This was present in all my cases.

Again, Mr. Bradley would not have said of Case 6, "some obstruction, the nature of which is not particularised"; whereas my words are "that about eighteen inches of the lower part of the jejunum was black from congestion", and that "I concluded that the black portion of intestine was in a state of enteritis, and on the verge of gangrene".

Again, he says "Mr. Teale resorted to a number of small incisions, through which flatus escaped"; my paper says "I made a quarter of an

inch puncture at each end of the protruded intestine, and caught in a bowl about two quarts of grumous intestinal fluid, and also let off a large quantity of flatus".

Mr. Bradley says "the patient lived for nine days, which seems to have surprised Mr. Teale very much". No doubt I was surprised, seeing that before the operation I did not think that the patient could live unrelieved twenty-four hours, and that the operation disclosed a foot of intestine almost gangrenous.

Mr. Bradley is still haunted by a fear of peritonitis, shutting his eyes to the teaching of hernia, the teaching of modern ovariectomy, and the teaching of the cases of exploration of the abdomen published by others and by myself.

The object of my paper was to reduce the dread of peritonitis to what I believe to be a more true position in the treatment of intestinal obstruction, and to maintain, that in those cases in which recovery seems hopeless, unless surgical relief can be given, we need not be deterred by the fear of peritonitis from submitting the patient to "the safer risk" of exploration.

I claim that as far as they go my cases support this object. Six are recorded. Three of the patients proved to be so exhausted as to be in a hopeless state. In one there was a burst bowel; in a second an abscess had burst amongst the intestines; in the third the intestines were obstructed by and studded with cancer. In none of these was there any question of setting up peritonitis. They form no argument, *quâ* peritoneum, either for or against exploration. A chance of recovery was neither given nor taken away.

Let us examine the three remaining cases. In all there was a healthy peritoneum. In all the nature and seat of the obstruction was unknown. One recovered completely. A second was free from peritonitis for nine days, until in a fit of coughing the abdominal wound was burst open, an accident which would in all probability not have happened had my attempt to relieve the obstruction by colotomy been successful. The third had no sign of peritonitis as a result of the operation, but died on the ninth day from bursting of the bowel and escape of faeces into the peritoneal cavity. In none of these cases did peritonitis prove the rock on which the case was wrecked.

It must needs be that, in the present state of "peritoneal surgery", exploration of the abdomen should be reserved, and rightly, for the most hopeless cases of intestinal obstruction, such as were all those which I have reported. Many will prove to have been hopeless from the beginning, some will prove to have been submitted to operation too late, a few will recover as a direct result of the operation. As we gain experience and confidence in our means of diagnosis and treatment, we shall rescue from death some of the cases now lost by delay. Is it too much to hope that we are now marching by means of failure onward to success in "peritoneal surgery"? May we not take a lesson from the position of ovariectomy of the present as compared with ovariectomy in the past?

One word more. Case No. VI in my paper, seems to point the way to dealing with distension of the intestines, one of the most formidable and dangerous factors in obstruction of the bowel. If further experience should confirm the teaching of this case, that we can effectually empty of gas and fluid distended intestines, and that intestines so emptied do not rapidly, if ever, regain their state of distension, we have therein the key to the successful treatment of an important class of fatal illnesses.

Leeds, June 1879.

CANCER OF THE RECTUM TREATED BY EXCISION.

By W. H. CRIPPS, F.R.C.S.,
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EXCISION of the diseased portion of the bowel for cancer of the rectum has, since the time Lisfranc, found much favour with foreign surgeons. The operation had, however, fallen into disfavour in this country, and has only been revived during the past few years. In cases judiciously selected, this method of treatment is of the greatest value, both as regards relief from suffering and prolongation of life. But to suppose that it is applicable as a method of treatment in every case of rectal cancer is as unreasonable as the assumption that cancer should be removed by operation wheresoever situated. The operation cannot be considered in any way to rival or supersede colotomy, for as a rule it is applicable as a method of treatment for cases in which colotomy is scarcely admissible. Colotomy is a most valuable operation when the cancer is situated higher and causes obstruction or intense pain; while, on the other hand, for excision to be successful, the disease must strictly