to empty the bowel it will be found of service. It may be used with excellent effect in the paralysis of peritonitis, and will, in that difficult case, produce evacuation where other means have failed. As a method of unloading the intestine in chronic obstruction, preparatory to operation, its value also expresses itself.

There is no organ of the body which requires more tender treatment than the bowel, and none which is so often left to be dealt with by the unskilled or uneducated. Many surgeons delegate the use of the enema to an assistant, as if this potent engine were unworthy of their own attention, and many who use it employ undue force. "No force" should be the postulate of our work with the intestine. We cannot be too persuasive, and it is because so much bad practice with regard to the use of the enema is followed, that I have ventured on such an occasion as this to urge my views against the use of the rigid tube, and to plead for one which has both complete safety, and infinite advantage in point of merit. I offer you no weary list of cases because after all they are only useful to substantiate opinion, and if you cannot accept a man's deliberate opinion you are not likely to put faith in his cases. Cases, like figures, can be twisted to prove anything. In such a position as that which, by the kindness of the Fellows, I occupy, a little dogmatism may be excused, and I feel so strongly about this matter of the tube that I have ventured to deal with it in preference to some more brilliant or alluring topic. I beg you to believe that if I speak forcibly it is because I feel conviction, and when I argue for the total abandonment of the older form of tube I desire to assure you that any words I use are spoken with a full recollection of the gravity which my office attaches to them.

Of course the great difficulty to be overcome in acute obstruction is that of diagnosis, and even to the most experienced no finality is possible. There is no branch of surgery in which extended clinical observation and careful reasoning work better together. A simple process of logic will help the most trained clinician to a true conclusion. No cases afford more opportunity for the display of high surgical qualities than those of which I have spoken. Given the proper faculties of observation and deduction, the two qualities which combine to produce great surgical fitness are thoroughness and resource, and in the management of obstruction of the bowel there is the most ample opportunity for their development.

THE TREATMENT OF OBSTRUCTION OF THE BOWEL BY ELECTRICITY.

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INTESTINAL obstruction is now generally treated by laparotomy, after purgatives, opium, and belladonna have failed; and there is no doubt that in the case of absolute mechanical occlusion, such as strangulation by bands, etc., the knife affords the only chance for the patient's recovery. Nevertheless, we are bound to admit that the risks of the operation are great, in spite of recent improvements in its *technique*; and for this reason it would appear preferable to resort to electricity rather than to laparotomy in cases where it is conceivable that the obstruction might be overcome by a powerful contraction of the muscular coat of the bowel, that is, in faecal accumulation and intestinal palsy, foreign bodies impacted in the intestine, etc.

In January, 1878, Mr. Allingham requested me to see with him a gentleman, aged 54, who had on the whole been in fair health, but had for the last three months suffered from obstinate constipation, for which purgatives and enemata had been used without much effect. Nothing in the shape of a solid or liquid motion had been passed for fully ten days, when I saw the patient. The abdomen was very much distended and tender; there was total loss of appetite, a degree of collapse, with sunken face, and a small and feeble pulse. Mr. Allingham had the day before introduced a long tube, but without bringing the faeces away; and was anxious that the effects of electricity should be tried, as the patient ap-

peared to be in great danger. I introduced an insulated sound, with free metallic end, into the rectum, and applied a moistened conductor to the abdominal parietes, chiefly in the region of the sigmoid flexure. The primary faradic current was now sent through, and its force gradually increased until the patient experienced a decided feeling of vibration in the bowel. This was done at 10 A.M., and the same evening the patient had a copious motion, with wonderful relief to all symptoms. During the next two days the bowels acted ten times, and in a week the patient appeared to be quite well.

Another case in which I have used faradism successfully was that of a married lady, aged 57, who had nearly all her life suffered from obstinate constipation, which she thought had been brought on "by living on biscuits at school." She had often gone for a week or ten days without relief, but did not appear to be much the worse for it until the time I was called in, when there was great distension and tenderness of the abdomen, bilious vomiting, and prostration after eight days' constipation.

I used the same proceeding as in the previous case at 5.30 P.M. At 1 A.M. she had a good motion, followed presently by two others, when an enormous quantity of faecal matters was discharged, with complete relief.

I regret to be unable to speak about the further progress of these cases, but in both of them life was evidently saved by the application of electricity.

"*Electric Injections.*"—In Paris the continuous current has recently been somewhat extensively used in similar cases, more especially by MM. Boudet and Larat, who have employed it in the form of so-called "electric injections." In order to avoid the escharotic effects of a metallic electrode applied directly to the mucous membrane of the intestines salt water is injected into the rectum, so as to act as a large liquid electrode, the metallic conductor connected with the positive pole of the battery being enclosed in an elastic sound, and thus conducting the electricity to the salt water. It is claimed that by acting in this manner a considerable current strength can be safely used. The circuit is closed by placing a large negative electrode on the abdomen, when the deflection of the needle of the galvanometer indicates the passage of the current. The strength in milliampères must be regulated according to the susceptibility of the patient. In many cases of pseudo-strangulation and faecal obstruction this proceeding, continued from five to twenty minutes, has appeared to give relief. In cases in which a real obstacle has to be overcome, it is recommended to use the current as directed for five or six minutes, and then to reverse its direction, care being taken first to reduce its strength, and get the needle of the galvanometer down to 0, after which the current is gradually put on again to its former power. As soon as the cathode acts in the rectum the bowel contracts, and great desire is felt for defaecation, which the patient, however, is instructed to resist until he finds it impossible to do so any longer. One, two, or three such applications may be required in the twenty-four hours. M. Boudet states that he has been successful with electric injections in 35 out of 50 cases (70 per cent.), while M. Larat claims 101 successes in 230 cases (nearly 44 per cent.). The latter recommends resort to laparotomy at once if the electricity has failed to act in the period just mentioned, and not to lose time by exhibiting purgatives. If electric injections were made soon after the appearance of bad symptoms, and laparotomy followed quickly after failure of electricity, the electrician as well as the surgeon would have a better chance of saving the patient's life than now, when they are often called in too late.

GASTRO-ENTEROSTOMY WITH SENN'S BONE PLATES FOR PYLORIC STENOSIS.

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THE choice between gastro-enterostomy by lateral anastomosis and the Heinecke-Mikulicz operation of pyloroplasty in cicatricial contraction of the pylorus is one that can only be satisfactorily made when the abdomen is opened. The plan of Loreta of digital divulsion is not likely to be favourably considered when compared with the newer methods