marvellous action as one observes in India in cases of simple amoebic dysentery.

The injection of emetine should not be done indiscriminately, and the result of each injection should be carefully observed. In suitable cases a grain should be injected subcutaneously night and morning. If no good results occur after four injections, it should be stopped, on account of the depressing influence it exerts. It can be resumed after a few days' interval if thought necessary.

Chronic Dysentery.

Chronic dysentery is a far more difficult and intractable condition to treat. The results of medical treatment in bad cases that have persisted for several months have proved to be very unsatisfactory. The majority of chronic cases are by no means simple infections, other intestinal micro-organisms step in as soon as the bowel becomes seriously damaged, and a state of chronic toxæmia arises.

I am indebted to Major E. F. Sealy, I.M.S., for permission to observe a large number of cases among the Turkish prisoners of war that were in his charge. From *post-mortem* examination of the large intestine in a few cases that died, my conviction that medical treatment has very little influence on the progress of the disease was verified. In practically all cases examined the whole of the large intestine was an abscess cavity with extensive ulceration and in parts total destruction of the mucous membrane. Where an attempt had been made at repair the intestinal wall had become converted into dense fibrous tissue, which would in time have formed strictures and have been liable to break down on the slightest injury. The pus, which lined the whole mucous lining, was very foul, and it was evident that the *Bacillus coli* took an active part in helping to bring about the condition. The immediate results of appendicostomy and washing out the large intestine with ordinary eusol solution were excellent. Though all cases operated on by Major Sealy and myself were in an extremely debilitated condition, and some were actually scorbutic, the shock from the operation itself was *nil*. The lavage was done night and morning through a fine rubber catheter and fully two quarts of eusol allowed to pass. The patient experienced no pain or inconvenience, and the fluid was passed by the rectum within ten minutes or so. The fluid passed cleared away all the foul debris in the large intestine, and absorption was prevented, the stools that were passed were rendered far less foul, the septic appearance of the patient improved wonderfully, and the temperature came to normal. Difficulties arose later owing to the appendix contracting and to the skin wound closing up. This operation gives good results for a time, but they are not maintained. Relapse is almost certain to occur, the reason, in my opinion, being that it does not provide the necessary rest for the large intestine.

The ideal treatment in such cases would be an ileocolostomy with appendicostomy and lavage. It is only in this way that the bowel can have the required rest. The injection of emetine in cases in which the *Entamoeba histolytica* is proved to be present should be carried out; of its specific action on the entamoeba there is no doubt; still its action on the ulcerative and septic changes in which at this stage other organisms are taking part is *nil*.

TWO CASES OF HEART FAILURE IN THE OPERATING THEATRE TREATED BY HEART MASSAGE: RECOVERY.

BY

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THE interest that has been taken of late in heart massage, applied to the heart through the diaphragm in cases of failure of the heart and respiration while a patient is undergoing an operation, has suggested to me that the following two cases are worth recording.

It has been advised that when a patient has collapsed on the operating table, and has failed to respond to the stimuli that are usually employed, after waiting a few minutes

the surgeon should start heart massage through the diaphragm. While success has crowned the operator's efforts after several minutes of waiting, it is advisable not to wait long before starting heart massage, because the patient is in desperate straits, and a delay of half a minute might mean all the difference between success and failure.

In Case II, reported below, heart massage was started as quickly as possible when the patient did not respond to artificial respiration, and as soon as it was found that he was pulseless; and even then the first period of heart massage failed to cause the heart to contract. Had heart massage not been started promptly it seems probable that it would have been too late to do any good.

When the operation under which the patient has collapsed is not an abdominal section, naturally a surgeon is anxious not to open the abdomen if it can be avoided, owing to the risks of peritonitis following an abdominal section when there has been no time to perfect the aseptic technique. For instance, in an operation for adenoids the surgeon's hands are not sterile, for they have been in the patient's mouth, and he may not have a sterilized scalpel at hand, nor any iodine solution to paint on the skin of the abdomen. Even then I would urge that delay may mean a life lost. Such cases as these test the judgement of the most expert. When the operation has already necessitated the opening a clean abdomen, there can surely be no reason for delay.

The most common causes of sudden collapse on the operating table are: (1) Idiosyncrasy to chloroform; (2) shock from operating while anaesthesia is incomplete; (3) any operation that causes a too sudden relief of increased intra-abdominal tension.

In nearly every case of death on the operating table that has come to my knowledge chloroform has been employed. Let me, at the risk of repeating what has been written many times, urge that unless there is some special contraindication, ether should always be employed as the anaesthetic. It is very rare to hear of a death on the table under ether.

CASE I.

Four years ago a lady, aged 63, was brought to consult me because her abdomen had been getting large, and she suspected that she might be going to be confined for the first time. On examination, an ovarian tumour was diagnosed. It was of great size, impeding respiration seriously—in fact, the patient appeared to be a shell surrounding an enormous tumour. The pulse was irregular, the arteries somewhat thickened, and there was a marked aortic systolic murmur and an accentuated aortic second sound. She was told that the condition would soon be incompatible with life, and at the same time that there was a grave risk in operating on any one in her condition. She elected to have an operation.

The abdomen was opened and the tumour removed after having been aspirated with a trocar. Immediately after removal the patient collapsed. Respiration and heart stopped. After a short attempt at artificial respiration had been tried and pituitary extract had been administered without effect, the right hand was introduced through the abdominal incision, the left hand was placed over the heart, and the heart massaged by a series of rhythmic squeezes at the rate of forty or fifty a minute; the right hand compressing the heart through the diaphragm against the chest wall was reinforced by pressure on the outside of the chest by the left hand. Meanwhile artificial breathing was continued. After a short time the heart commenced to beat, respiration was restored, and the patient made a rapid recovery. Ether was the anaesthetic employed. The collapse was due to sudden relief of intra-abdominal pressure. The ovarian tumour was so large that it took two people to lift it off the table.

CASE II.

On January 10th, 1917, I was operating on a man for appendicitis. The abdomen had just been opened, and the man suddenly collapsed. Respiration and pulse were negative. The incision was rapidly enlarged, and the right hand introduced. The heart felt absolutely flabby, not a sign of contraction. Massage was started as in Case I, and artificial respiration continued. After about one minute, massage was stopped to see if the heart would contract. It would not. Massage was commenced again, and after about another minute the heart commenced to beat feebly. Pituitary extract and strychnine were injected, and after about five minutes the patient's condition improved so much that it was decided to complete the operation, as the appendix was distended and contained pus. His colour remained rather bad most of the day, and the pulse was irregular, but after continuous salines and adrenalin by the rectum, his condition in the evening caused no anxiety, and he made a good recovery. The anaesthetic used was a mixture of chloroform and ether before the collapse, and ether subsequently.