

being formed either of peritoneum or possibly of a thickened area, up to the size of the palm of the hand. The symptoms for the most part were agonizing pain after eating, frequent vomiting, hæmatemesis, and mælena. At times the patient made no complaint, and was unaware of suffering any departure from health. In truth, the symptoms were no sure guide to the extent of the disease. In the majority of cases cicatrization took place, although in 25 per cent. perforation occurred. In 85 per cent. the perforation was on the anterior aspect of the organ opening into the peritoneal cavity. Young servant-girls were especially prone to anterior perforation. He disapproved of Billroth's recommendation of timely laparotomy, excision of the ulcer, and suture of the wound, unless it was possible to establish an exact diagnosis. The surgeon's duty consisted in the prevention or arrest of peritonitis. The only hope of doing good lay in cleansing the peritoneal cavity. Hitherto too much stress had been laid on suturing the rent in the stomach and too little on cleansing the peritoneum. The following measures should be adopted: (1) simple washing out of the abdominal cavity; (2) suture of the ulcer; and (3) where that was impossible, suture of the stomach to the abdominal parietes. But he could not too often repeat that the success of these cases depended upon cleansing the peritoneum.

Experience alone could decide the precise period when the operation should be performed. If too long a time were allowed to elapse, the peritonitis became general and intensified. Moreover, under these circumstances, masses of lymph concealed the affected parts and interfered with the cleansing of the sac. The best site for the incision was in the middle line, as this gave the best access to the whole of the abdomen, while the seat of pain was no guide to localization. First among the fluids used for flushing he placed normal salt-solution, and then boiled water. He avoided acid or toxic solutions, and used the water hot, as he found it a powerful restorative. A vital step was the systematic flushing with a large exit-tube; where practicable he sewed up the ulcer, but attributed no particular advantage to paring or excising the ulcer. The stomach might or might not be washed out. The value of exploration with the finger was doubtful. When in doubt, drainage should be resorted to. If the collapse were not relieved by hot water, he practised intra-venous injection. He read the notes of six successful cases of operation in perforating gastric ulcer. With regard to perforation in typhoid ulcers he had collected, excluding doubtful cases, seventeen cases of operation with one recovery. The steps of the operation were the same as those for gastric ulcer. Statistics show that there were from $2\frac{1}{2}$ to 3 per cent. of perforation in all cases of

typhoid fever,—most frequently occurring in the ileum, often multiple, sometimes so small as to allow no escape of intestinal contents. They usually took place during the third week, but cases were known as late as the sixty-sixth day. The symptoms may be very marked or quite latent. Death may close the scene in ten minutes; the patient rarely survives more than two days. Recovery was exceedingly rare. He concluded by saying that the truest wisdom was the wise selection of cases.

Dr. R. Maclaren, of Carlisle, in operating for gastric ulcer, preferred to make his incision in the left linea semilunaris, four inches in length, which allowed good access to the stomach. He emphasized the point that cleansing of the peritoneum was all important. The conditions of success were system, perseverance, and a patient not on the verge of death from collapse. A detail of much importance in after-treatment was rectal feeding. Again, if the patient were much collapsed, he did not believe much in flushing. He described fully his method of cleansing the peritoneal cavity. In his opinion, the operative procedures in these cases were troublesome rather than difficult. For example, if the intestines were distended, more difficulty was experienced. Great mortality was, however, only to be expected. He mentioned a case, in which he had the advice of Dr. Heron Watson, where perforation occurred in connection with a typhoid ulcer. The only treatment adopted was that of making an incision over the cæcal region and inserting a drainage-tube. The patient, although desperately ill for some time afterward, made an excellent recovery.

Mr. Rutherford Morison, of Newcastle, related a case in which he had operated for gastric ulcer on a woman of 23. She had had a large quantity of bread and milk for her supper, and one hour afterward was suddenly seized with acute pain. On examination the diagnosis was arrived at of gastric perforation, but one of the chief symptoms present was dullness in the flanks. The collapse was extreme. Two hours afterward the abdomen was opened in the middle line over the stomach and the omentum torn through, when a large quantity of fluid escaped, and an ulcer was found on the posterior wall of the stomach. Lembert's sutures were used. The abdomen was flushed out. The patient did well for five days, although there was great difficulty in managing her. Ultimately, however, she became very restless, passed into a collapsed condition, and died on the ninth day. He thought that the collapse at the time of operation in these cases was relieved by the operation and flushing of the abdomen. When the patient, however, was livid, any operation was certainly contra-indicated.

Mr. Gilbert Barling thought that some of the