

tions come into play, such as the nature of the exudation, serous or purulent or faecal—whether it is well localized or diffuse, and the condition of the patient—whether able to stand a prolonged operation or not—that it is not surprising that opinions are divided as to its advisability. Treeves said last March that the bias of opinion was against irrigation. Pearce Gould, last October, in a paper on “Operative Treatment of Perforated Ulcer of Stomach and Intestine,” said cleansing of the peritoneum was the important step in the operation. No time or care must be spared to make this flushing absolutely thorough, as upon it chiefly hangs success or failure. Roderick Maclaren, on the same subject, at the B. M. A. meeting last October, said: “Cleansing of the abdominal cavity is all-important. Success depends almost entirely on how this is done.”

Gilbert Barling believes in a very thorough flushing. Ford Cousens says the cavity must be cleansed at all risk, but prolonged irrigation must be avoided. Knowsley Thornton, in speaking of diffuse septic peritonitis, at the Royal Medical and Clinical Society, last October, said “that septic material spread over the surface of the gut rendered thorough irrigation absolutely necessary:” and at this meeting there was not one opposed to this method of treatment. Once having septic material in the peritoneal cavity, it seems that if we care to stop the spread of the peritonitis, it must be got rid of. In Germany it has been done by wiping the surface with aseptic gauze. In England I think I am safe in saying that flushing it out is preferred. It seems to me that the former method is rough, tends to do more damage, and cannot be as effective as irrigation. Certainly it might be used when there was a septic deposit: but for a thin layer of septic serum, or sero pus, spread over a large part of the peritoneal surface, I should think it ineffective and possibly harmful, both to the tender peritoneum itself and to any occlusive adhesions formed by nature, should a perforation be the starting-point. The danger in irrigation seems to be that the septic material may be washed to distant portions of the peritoneum: but is not this spreading of the peritonitis one of the bugbears, in fact, our chief danger? and should the poison be got rid of, the trouble ceases, or rather, we have a simple localized inflammation to deal

with. Should the patient be in a condition of collapse, and not able to stand prolonged and thorough irrigation, then more speedy but less effective measures would have to be adopted.

As to the fluids used, they are many: Carbolic acid solution, boric acid, corrosive sublimate and salicylic acid solutions. Many use boiled water and some a weak preparation of alcohol. But whatever solution fluid is used it cannot be used as a germicide, and all that can be aimed at is a solution that is sterile and non-irritating. Perhaps the choice is between a sterile 0.6 per cent. salt solution and boiled water at 110 to 105 F.

The fluid is introduced at low pressure, and in a wide stream, with a soft rubber tube, regulated with a clip: the peritoneal cavity to be gently flooded out, and by a movement of the hand and pressure here and there the fluid overflows by the wound.

Let me say here that much success depends on the systematic treatment of shock, as Mr. Lockwood said at the Royal Medical and Clinical Society, last October, in reporting three successful cases of septic peritonitis diffuse, “a systematic attempt was made to meet exhaustion and collapse, by stimulating the patient before the operation, with strychnine, hypophosphites and brandy, rapid and methodical operation, during which there was systematic application of warmth, and by warmth, stimulants and nutrient enemata afterwards.”

*Drainage.*—All are agreed that when a noxious material is left in the peritoneal cavity, or when it is thought an extensive effusion will follow the operation, drainage is necessary. The drains most used are glass, rubber and iodoform gauze. The latter may cause poisoning if extensively used, and is difficult to remove. Either glass or a stout rubber tube, large size and well fenestrated, are best. If there is likely to be much discharge, requiring the moving of the patient to further its escape, rubber is best.

*Puncture and Incision of the Intestine.*—A distended intestine is often a difficult thing to replace, and is a cause of not only discomfort but danger to the patient. The cases operated on last month by Drs. Kidd and Small are still fresh in the minds of those who were fortunate enough to be present, and particularly in the former case was there great distention. This distention is due to