

Drainage after Abdominal Section.*

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Many writers state that drainage after abdominal section is an admission of the present imperfect state of surgery, and an acknowledgment of failure to fulfil the indication for which the operation was performed. All, however, admit that in certain cases drainage is necessary, or, in other words, that some cases will recover with drainage that would die without it. If drainage saves life, its employment requires no defence, and the apologetic tone in which it is referred to is misleading and unjust.

The *fin-de-siècle* rubber-gloved gynæcologist, operating on chronic cases and removing pathologic specimens, which, if not of respectable origin, are at least of respectable antiquity, may be able to report a series of a hundred successful sections without drainage, but the general surgeon, dealing with acute peritoneal infections from a gangrenous gall-bladder, a perforated bowel, or a ruptured appendix, must provide for drainage, or his patients will die. It is not a theory, but a condition which confronts him, and its solution should not be termed a necessary evil, but a life-saving measure.

It is undoubtedly true that, with increased experience and greater perfection of operative technique, all surgeons find fewer and fewer cases requiring drainage. Still, they follow the old rule—when in doubt, drain; the only difference is that they do not doubt as often.

It is a fallacy to hold that the experience of one generation is a legacy to the succeeding one, and it will prove disastrous—at least, in this instance—for the comparatively inexperienced surgeon to adopt the conclusions of the masters in the profession; to equal their confidence without equalling their skill and judgment; to cease to doubt, and hence cease to drain.

The early success in abdominal surgery was largely achieved by drainage. The adoption of aseptic and antiseptic measures has much curtailed its field of usefulness. There are still cases, however, where it is impossible to sterilise the peritoneal cavity, and here it assumes its original rôle of importance.

The questions of when to drain and how to drain the abdominal cavity are presented more to provoke discussion than with any hope of final solution. They belong to the same category as the problem of when to operate in appendicitis, and, like it, must be settled in each individual case more by surgical intuition than by any rule of rote.

Before considering them, it is necessary briefly to state a few physiological facts:—

1. The peritoneum can absorb large quantities of fluid, sometimes a weight equivalent to that of the animal in twenty-four hours.

2. Irritation or inflammation of the peritoneum lessens its absorptive powers.

3. The peritoneum can neutralise large numbers of pathogenic germs without the development of peritonitis.

4. The more rapid the absorption from the peritoneum, the greater the toleration to bacteria.

5. Stagnation of fluid in the peritoneal cavity favours the development of peritonitis.

6. Leucocytes carry foreign particles from the peritoneal cavity to the lymph and blood-vessels.

7. There is a current in the peritoneum which carries fluid and foreign particles towards the diaphragm.

Thus it will be seen that the peritoneal cavity, up to a certain point, drains itself. After that point is passed it ceases to drain at all. For the surgeon to drain some cases does harm, as it is needless; for the surgeon to drain other cases does good, as it is necessary.

Despite the labour devoted to modern surgical technique, absolute asepsis is an unattained ideal, and an abdomen opened is an abdomen infected. All require drainage, and the question is simply to determine the dividing line between the cases that may safely be left to Nature and those which require artificial aid. The decision is to be reached more by a consideration of the condition of the general peritoneum than the quantitative or qualitative character of the poison with which it is contaminated, for a large absorptive power can effectively deal with an infection which would prove rapidly fatal if the power to eliminate it were absent.

The objections to the employment of a drain are that it is a foreign body; prevents primary union; endangers secondary infection; sometimes causes fecal fistula; frequently gives pain, and always prolongs convalescence. Despite these undeniable facts, the indications for the use of a drain are sometimes imperative, for the one great object of the surgeon is to save life, and all else must be sacrificed to its attainment.

No surgeon would drain when hæmostasis has been complete and the operation has been aseptic; few surgeons would drain for small bleeding or the contamination of a healthy peritoneum with the contents of a ruptured cyst or pus tube; most surgeons would drain for uncontrollable capillary oozing or the existence of acute local or general peritonitis.

Broadly stated, drainage should be used in the following cases:—

1. When bleeding is uncontrollable, as after the enucleation of an intra-ligamentous cyst.

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[previous page](#)

[next page](#)