

patients whose treatment was delayed indicated doubt on the part of the physician as to the diagnosis and, more disastrously a lack of an organized plan to establish the diagnosis.

A particularly difficult diagnosis is the detection of reobstruction postoperatively. This occurred four times and each patient required another operation. Here, early diagnosis is imperative, and barium by mouth may be particularly helpful. Delayed reoperation may be fatal because of "metabolic bankruptcy"⁸ in a patient fasted for prolonged period.

As preoperative preparation improves and anesthetic management is more skillful, the mortality from abdominal exploration should approach zero. Although there is a place for careful non-operative evaluation of a patient with abdominal distention and pain, the time is coming when the risk of exploratory laparotomy for adynamic ileus may not be as great as the risk of neglecting a simple obstruction or allowing it to progress to strangulation.

Summary

In 111 consecutive cases of mechanical small bowel obstruction the morbidity rate was 23.4% and mortality rate 4.5%. Various factors contributing to these complications are discussed with particular emphasis on delay of treatment as a major cause for unsuccessful outcome.

References

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DISCUSSION

DR. ISIDORE COHN, JR. (New Orleans): I have both an interest and considerable past experimental experience with the problem of intestinal obstruction. Dr. Holloway has made a very nice presentation of their experience with the problem, and I think he has emphasized—more in the

manuscript than in his presentation—the debt all of us owe to those who have come before who have segregated the difference between simple and strangulation obstruction. Today no real justification exists for loss of life due to simple obstruction, unless we can blame this on either patient or physician delay.

Our real problems still remain with the patients who have strangulation obstruction and these problems will continue for some time.

I disagree with only one point that Dr. Holloway has made. He has stressed the importance of evacuating the contents of the bowel, and I do not really think this is as important as he has indicated. It is of importance in those patients who have such tremendous distension of the bowel that abdominal closure cannot be accomplished without evacuating bowel contents. We have seen, however, on more than one occasion instances where the hole, which is always "infinitely small," leaks, and permanent trouble occurs in the postoperative period.

The gastrointestinal contents left behind within the bowel are not dangerous if there is normal mucosa, because the normal bowel mucosa will not absorb whatever toxins are produced within the lumen of the bowel.

On the other hand, if there is damaged mucosa, that segment of bowel should be resected as this is a completely different problem.

When confronted with this problem, one should remember that antibiotics can be used systemically, to irrigate the peritoneal cavity or to leave in the peritoneal cavity. Any fluid that is found in the peritoneal cavity should be removed.

Since all are confronted with the problem of intestinal obstruction from time to time, we need to be reminded of the difficulties that arise in the management of these patients. Dr. Holloway has done that very nicely.

DR. EDWARD T. NEWELL, JR. (Chattanooga): To some of us clinical surgeons, intestinal obstruction is still a major problem, and certainly early diagnosis and surgery is most important.

Of our older members, Dr. Carrington Williams, Sr., started writing and publishing in the literature and speaking to this audience in the later forties or early fifties, and it has stood me in such good test that I will have to disagree with my young friend Isidore Cohn.

I think the majority of intestinal obstructions are due to adhesions. Sometimes these adhesions are present for a long time before the obstruction is complete, and at operation there is tremendous hypertrophy of the proximal obstructed loops

and terrible distension. Enterostomy—decompressing the bowel at operation and closing—I think is of tremendous value.

In many, many instances we obtain from 1,000 to 3,000 cc. of fluid threading along the particular intestinal suction tube, and one can certainly decompress anywhere from 8 to 12 feet of bowel. It has to be done very gently. There is undoubtedly contamination, but with present-day antibiotics and good Alloy steel wire sutures for closure of the abdominal wall, things usually work well.

In other types of small bowel obstruction where the vascular occlusion occurs early, there is very little proximal distension of the bowel but considerable gangrene which has to be resected. Decompression at operation is seldom necessary in these cases.

DR. RICHARD HUGHES (Salisbury): I would like to reinforce Dr. Cohn's point in regards to routine evacuation at the time of operation. I wonder how rapidly these fluids reaccumulate in the early postoperative period?

In Dr. Ellison's report in *Surgical Forum* he pointed out that the accumulation to the same volume that was present at the time of evacuation occurred in 46 hours in dogs. I would wonder, then, if this was not just indicated from the standpoint of facilitating closure, and not as a routine procedure.

DR. R. HERMAN PLAYFORTH (Closing): In answer to Dr. Cohn, we also do not believe that routine evacuation is necessary. However, with certain patients that are maximally distended, etc., it does become an important adjunct.

As Dr. Griffen has frequently pointed out to us as residents, and as is frequently used at the University Hospital—it is not necessary to make a hole in the intra-abdominal portion of the bowel to evacuate it, but this can be done with the proper tubes passed orally during operation.

Our current philosophy, of course, is rapid preparation and early operation which is very aptly portrayed by a slide that I obtained from Dr. Griffen's teaching files. (Slide) Never let the sun rise or set on an intestinal obstruction.