

Laparoscopic and conventional closure of perforated peptic ulcer

We read with interest the paper by Miserez and colleagues (*Surg. Endosc.* 1996; 10: 831–836), in which the authors conclude from the results of their study that laparoscopic closure of perforated peptic ulcer is technically feasible. However, the safety of the method and the benefit for the patient would need proof by means of a randomized controlled trial. As we agree with the authors on the need for further research in the field we would like to make some remarks concerning the design of such future studies.

While the precise monitoring of pain intensity and consumption of analgesics is appreciated in this study, a major concern is that a surgical standard of open closure was not met in the laparoscopic procedure. Open repair of perforated ulcer included local excision of the ulcer formation. In contrast to the open procedure, the authors neglected local ulcer excision in the laparoscopic operation. Compromises of surgical standards set in conventional open surgery may disparage minimal invasive surgery and therefore must not be accepted.

In an experimental study in the rat we have recently reported that carbon dioxide pneumoperitoneum accentuates the extent and severity of peritonitis, assessed by histopathologic peritonitis severity score and microbiologic cultures of abdominal swabs and blood samples, when the interval between gastric ulcer perforation and pneumoperitoneum lasts 12 h or longer [1]. As more than 30% of patients suffering from peptic ulcer perforation are subject to surgical intervention with a delay of more than 24 h between perforation and surgery [2], this experimental finding may be of clinical importance. In the report by Miserez and associates the time lag between ulcer perforation and surgical intervention is only mentioned indirectly in the data summarized by the Mannheim Peritonitis Index. We would like to draw attention to the association between duration of peritonitis and adverse events in laparoscopic surgery for peritonitis-related conditions. Therefore, detailed information should be given on the time interval between perforation and surgical intervention in future studies.

In the study by Miserez and colleagues, conversion to open surgery was necessary in some patients in which laparoscopic surgery was started but proved technically infeasible. The fact that these patients were redistributed to the conventional surgery group is troubling. In light of our experimental study, patients who have been under the influence of pneumoperitoneum should not be transferred to the conventional surgical group after conversion. This may distort the results. Furthermore, it is questionable whether a patient who underwent BII gastrectomy should be included in the group for conventional closure of perforated peptic ulcer.

We are strongly convinced that further sound experimental and clinical studies, which focus on potential risks of laparoscopic management of peritonitis, are needed to define the impact laparoscopic surgery holds in the therapeutic concept of peritonitis-related conditions.

References

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