


# Laparoscopic lavage in perforated purulent diverticulitis—*is it time for definitive conclusions?*

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Dear Editor:

We read with great interest the recent meta-analysis published about laparoscopic lavage in perforated purulent diverticulitis by Angenete and colleagues [1]. A minimally invasive approach to acute diverticulitis is an issue of great interest with an animated debate among surgeons; randomized trials were conducted to clarify the real benefit of lavage in purulent peritonitis from diverticulitis. The authors of the meta-analysis demonstrated that laparoscopic lavage was associated with a reduced rate of reoperations within 12 months with comparable morbidity and mortality.

We would like to comment on these results at the light of another meta-analysis simultaneously published by our group in the *World Journal of Emergency Surgery* [2]. Our results were unanimous in defining no difference in morbidity and mortality at 3 and 12 months between laparoscopic lavage and sigmoid resection and also showed an augmented rate of reoperations in the resection group, due above all to stoma closures. However laparoscopic lavage was associated with a significantly higher incidence rate of intra-abdominal abscesses and higher reoperation rate during the index admission.

As highlighted by both meta-analysis' results, these conclusions should be interpreted cautiously: at the moment, only three randomized trials are available but with contrasting results and different study's designs. The major part of pooled results of these meta-analysis were based only on the result of two out of three studies with a relatively small number of patients included [2]. Moreover, another randomized trial is still ongoing, the LapLAND trial (NCT01019239).

At the light of all these considerations, we would like to suggest great caution in interpreting results of the meta-analysis by Angenete and colleagues [1]: laparoscopic lavage could not even be considered a valid alternative treatment to sigmoid resection for purulent perforated diverticulitis. As suggested by the last guidelines on acute left-sided diverticulitis [3], the best treatment option still remains sigmoid resection until new available evidences will help in better clarifying the role of laparoscopic lavage.

## References

1. Angenete E, Bock D, Rosenberg J, Haglind E (2016) Laparoscopic lavage is superior to colon resection for perforated purulent diverticulitis—a meta-analysis. *Int J Color Dis*. doi:10.1007/s00384-016-2636-0
2. Ceresoli M, Coccolini F, Montori G, Catena F, Sartelli M, Ansaloni L (2016) Laparoscopic lavage versus resection in perforated diverticulitis with purulent peritonitis: a meta-analysis of randomized controlled trials. *World J Emerg Surg* 11:42. doi:10.1186/s13017-016-0103-4
3. Sartelli M, Catena F, Ansaloni L, Coccolini F, Griffiths EA, Abu-Zidan FM et al (2016) WSES guidelines for the management of acute left sided colonic diverticulitis in the emergency setting. *World J Emerg Surg* 11:37. doi:10.1186/s13017-016-0095-0

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