

# Laparoscopic Lavage Is Feasible and Safe for the Treatment of Perforated Diverticulitis With Purulent Peritonitis: The First Results From the Randomized Controlled Trial DILALA

## To the Editor:

We read with great interest the article by Angenete et al,<sup>1</sup> titled "Laparoscopic Lavage Is Feasible and Safe for the Treatment of Perforated Diverticulitis With Purulent Peritonitis," in the December issue of *Annals of Surgery*.

Although the authors reported that laparoscopic lavage is a feasible and safe treatment for patients with Hinchey III diverticulitis, we feel that some aspects need further clarification. The first observation concerns the flowchart of patients included in the trial (Fig 1). Among 267 patients admitted in 9 surgical departments over a 4-year period, 139 were included in the study, and among those, 83 were finally randomized to 1 of the 2 treatment options.

Of the 128 patients not included, 52 had a Hinchey III peritonitis, 13 were excluded for surgeon choice or other diagnosis, and 10 were excluded for unspecified reasons. This finding must mean that the patients were enrolled into the study in a nonconsecutive manner, and it also raises the question of a possible selection bias because, taken altogether, those 75 patients almost reach the same number of patients enrolled in the trial. So it would be important to know what kind of treatment was performed in this group.

A second aspect to be discussed is the difference of the percentage of a visible perforation in the colon that was found in 5.2% of the lavage group versus 50% in the Hartmann group. The authors try to explain this difference with a less extensive dissection in

the lavage group, but only in 4 of 39 patients in the lavage group adhesions were reported as severe whereas in 35 patients the presence of adhesion was judged absent or "average." This difference among the 2 groups is of not negligible importance because a recognized factor limiting the effectiveness of laparoscopic lavage is the presence of a visible perforation.<sup>2,3</sup>

Twenty-eight of 39 patients (71.8%) and 21 of 36 patients (58%) in the lavage and Hartmann groups, respectively, had complications, and 3 patients in the lavage group died within 30 days. Were those patients who died those in whom the lavage failed?

A purulent peritonitis is mostly due to a small perforation spontaneously covered by omentum or small bowel adhesions. Should the lavage fail, the recurrent peritonitis is very often a fecal one, with the patient rapidly deteriorating toward a surgical sepsis. So in the decision-making process, to perform a conservative treatment, the surgeon must include not only the degree of contamination but also the physiologic reserve/derangement of the patient and the burden of comorbid disease.

A systematic review of the clinical course of diverticulitis in immunosuppressed patients showed the following mortality rate: 56% in patients treated conservatively; 43% when exteriorization/colostomy was performed; 20% when primary resection-anastomosis was accomplished; and 14% in patients submitted to the Hartmann procedure.<sup>4</sup> The fact that the most aggressive procedure, the Hartmann, seems to give better results in the most fragile patients could suggest that controlling the source of the sepsis is still the most appropriate treatment.

On February 2014, the LADIES trial prematurely closed the LOLA arm (Laparoscopic LAVage) for safety reasons.<sup>5</sup> The definitive long-term results of the DILALA<sup>1</sup> trial and the results of the ongoing randomized trials (LADIES,<sup>5</sup> LAPLAND,<sup>6</sup> and SCANDIV<sup>7</sup>) are eagerly awaited to establish the definitive role of laparoscopic lavage. Despite the great appreciation for the hard work of Thornell and colleagues in running a randomized trial in an emergency setting for a

life-threatening condition, we would like to warn against the risk of undertreating patients, losing the window of opportunity of a definitive treatment. In our opinion, the time to bid Professor Hartmann adieu has not yet come.<sup>8</sup>

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