

Achalasia Treatment. Robotic Approach or Laparoscopy?

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Abstract

Background: Nowadays the question persists whether to choose the endoscopic or surgical method as the first treatment of choice for achalasia. Another debate topic is about the differences between the outcomes of the two approaches of minimally invasive surgical treatment and their feasibility.

Material and Methods: This retrospective observational study included 193 patients with achalasia treated between 2008 and 2021. The patients were divided into 2 groups (A and B): 152 with minimally invasive heller myotomy (HM), and 41 with pneumatic dilation (PD). Patients surgically treated were then subdivided into robotic group (RG) and laparoscopic group (LG).

Results: The recurrence rate was significantly higher in PD group ($c^2 = 16.81$, $DF = 1$, $p < 0.0001$), with a success rate of 63,4%, comparing with 92,7% in HM group. No significant difference was obtained between the 2 groups concerning symptom relief on patients successfully treated. The success rate was comparable between the robotic and laparoscopic groups ($p = 1$). Significant difference was obtained in length of hospital stay between the 2 groups, with a mean of 4.78 ± 1.59 days in the RG and, respectively, 5.52 ± 2.1 days in the LG ($t = 2.40$, $DF = 124.34$, $p = 0.0177$). Postprocedural esophagitis rates were higher in patients with no fundoplication (6 out of 37 - 16.2%) and in patients treated with pneumatic dilation (4 out of 26 - 15.4%) than in patients with fundoplication (4 out of 46 - 8.5%).

Conclusion: The present study indicates that surgery may be a better choice in fit patients for the treatment of achalasia. The procedure has a better success rate, even if the long-term outcomes are comparable in patients successfully treated. The success rate and long-term results were comparable between laparoscopy and robotic surgery.

Key words: achalasia, pneumatic dilation, Heller myotomy, minimally invasive surgery, laparoscopic, robotic