

## The indications and contraindications of exploratory laparoscopy in the diagnosis and treatment of abdominal trauma

*Academic authors:* **Pedro Eduardo Ricciardi Cosac, Jean Marcelo Strippoli Doffini, Isabella da Cunha Henriques**

*Academic advisors:* **Guilherme Dalle Vedove Barbosa**

**Introduction:** The choice of exploratory laparotomy for patients with abdominal trauma has traditionally been used. However, despite their high versatility and accuracy in diagnosing and treating injuries, some patients have little or no previous damage. This results in a high rate of non-therapeutic Laparotomies. Studies that analyze the use for laparoscopic diagnosis and treatment of abdominal trauma demonstrate that this procedure is safe and can reduce the rate of unnecessary Laparotomies. On the other hand, it is verified, in parallel, the evolution of Laparoscopies for exploratory Laparotomies reach higher numbers, which worries the medical community.

**Objectives:** The aim of this study was to integrate the already verified studies based on a critical analysis about the indications and contraindications of the use of Laparoscopies in the control of abdominal trauma injuries.

**Methods:** A systematic search of information was carried out on PubMed, Google Academic, Lilacs and SciELO databases without stipulating time intervals. The following key terms were used at random: Laparoscopy in abdominal trauma, Laparoscopy in penetrating abdominal trauma, Risks of a Laparoscopy in abdominal trauma. The nine studies that were more identified with the research line were selected.

**Results:** The results show that Laparoscopy is a potential method diagnostic and therapeutic and that it is effective in the treatment of most abdominal injuries. In addition, it was verified that the rate of lesions lost with the use of this method is low and that, compared with the exploratory laparotomy, it has a lower number of postoperative complications and a shorter hospital stay after the procedure. Such a procedure should be encouraged in patients who are hemodynamically stable, and the indication of patients not stable for the procedure up to the moment controversial and, therefore, contraindicated. It was verified that, because the procedure involves gastric distension of the abdominal wall and consequently cause a lower pulmonary volume associated with an increase in peripheral vascular resistance, patients with severe pulmonary dysfunction contain restriction to the procedure. Patients with severe cranioencephalic trauma are also unable to perform the procedure, due to the carbon dioxide present in the abdominal wall having a high potential to cause cranial hypertension.

**Conclusion:** Laparoscopy is of great value for surgery to control damage in abdominal trauma. In addition, because of its lower morbidity, surgical complications and hospitalization time compared to exploratory laparotomy, its use should be encouraged not only to minimize unnecessary procedures, but also to generate a better postoperative quality to the patient, as well as lower hospital expenses with surgical complications and length of hospital stay. It should therefore be used only in hemodynamically stable patients who do not present severe head injury and/or severe pulmonary dysfunction.

**Keywords:** Abdominal trauma; Laparoscopy; Abdominal trauma injuries.