

## **Incisional Hernias with Loss of Abdominal Domain: A New Look to an Older Issue or the Elephant in the Living Room. Literature Review**

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### **Abstract**

Incisional hernia (IH) is a postoperative defect of the abdominal wall through which the contents of the peritoneal cavity are externalized beneath the skin in a peritoneal sac. IH differs in anatomic complexity, but also in its associated comorbidities and surgical history. As IH enlarges, complications occur and these become part of its natural history. The goal of the study is to review the impact of loss of domain upon abdominal wall before and after abdominal wall reconstruction. The absence of anatomical and functional linea alba leads to a combination of muscular disturbances, chronic respiratory and gastrointestinal conditions, and psychosocial issues. The pathophysiological changes are also due to the decrease of the intra-abdominal pressure (IAP). During repair, the sudden reintroduction of the viscera into an unprepared cavity leads to a sudden increase in cavity volume and an increase in IAP with fatal pathophysiological implications. For an optimal repair, preoperatively, the abdominal wall must be augmented by achieving the following objectives: reducing the volume of the sac contents, optimizing compliance, enlargement of the container. At the same time, for the optimal repair, the following must be taken into account: increased knowledge about this condition to manage systemic and local changes, CT scan evaluation, monitoring IAP, plateau pressure (PP), and Positive End Expiratory Pressure (PEEP). In conclusion, the goals can be achieved by systemic optimization with a multidisciplinary team, using Preoperative Progressive Pneumoperitoneum (PPP) and/or Botox (BTX), and abdominal wall reconstruction through a mesh with augmented component separation technique.

**Key words:** incisional hernia, loss of abdominal domain, respiratory failure, intra-abdominal pressure, intra-abdominal hypertension, abdominal compartment syndrome