



## **Global Conference on Multidisciplinary Research and Innovation**

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### **CLINICAL EFFICACY OF A CT-HERNIOABDOMINOMETRY-BASED SURGICAL STRATEGY IN POSTOPERATIVE VENTRAL HERNIAS**

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#### **Relevance**

Recurrence after repair of postoperative ventral hernias ranges from 15% to 55%, and forced closure of large defects may cause raised intra-abdominal pressure and abdominal compartment syndrome. Selecting a functionally tolerable volume of repair requires objective preoperative criteria rather than clinical estimation alone.

#### **Material and methods**

In 58 operated patients with postoperative ventral hernias, the method of repair was selected according to the relative hernia volume obtained by CT hernioabdominometry: reconstructive hernioalloplasty for a relative volume  $\leq 14.0\%$  and corrective repair for  $\geq 14.1\%$ , with intraoperative monitoring of respiratory and hemodynamic parameters during trial approximation of the hernia ring edges. Postoperative complications, recurrence and the development of compartment syndrome were assessed.

#### **Results and discussion**

Reconstructive repair with full restoration of abdominal wall anatomy was performed in 31 patients (53.4%) with small and medium hernia volumes, and corrective tension-free repair in 27 patients (46.5%) with large and giant hernias and pronounced degenerative changes. Trial approximation of the hernia edges under spontaneous breathing reliably identified patients in whom full adaptation was not tolerated (a rise in respiratory rate of about 30%, a fall in saturation of 8–



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10% and tachycardia), who were therefore assigned to corrective repair. Implementation of this differentiated strategy reduced the overall postoperative complication rate from 11.9% to 4.3% and prevented both abdominal compartment syndrome and hernia recurrence.

### **Conclusion**

A surgical strategy based on the criteria of CT hernioabdominometry allows the volume of repair to be matched to the functional reserves of the abdominal wall. This differentiated approach significantly reduces wound and extra-abdominal complications, prevents abdominal compartment syndrome and lowers the recurrence rate in patients with postoperative ventral hernias.