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Surgical Approach to Bilateral Inguinal Hernia. A Case-Control Study

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Abstract

Introduction: Bilateral inguinal hernia can be safely repaired simultaneously, open or minimally invasive, in an elective sce-nario. The choice of surgical approach depends on the patient's status, hernia characteristics, surgeons and patient preferences. Whether age criteria should be considered when selecting between the two approaches is still a matter of debate. Considering that there is no consensus regarding the best repair in bilateral inguinal herniorrhaphy, the aim of the study is to perform an analysis regarding elective surgical approach of patients with bilateral inguinal hernias.

Material and Methods: To study the relationship between exposure to an open versus laparoscopic approach in patients with bilateral inguinal hernia, we conducted a case-control study. In our retrospective analysis, cases (23 patients) were the open-approach hernia repair, and controls (82 patients) were laparoscopic hernia repair. We analyzed two sets of variables: first, related to patient characteristics (age>65 years, BMI>30 kg/m2, smoking habit, HTA status, COPD status, DM status, use of anticoagulants, presence of neoplastic status) and second, variables related to hernia features (inguinoscrotal hernia, recurrent hernia and complicated hernia).

Results: The mean age for cases was 73.26 (±12.99) years and that of controls, was 56.48 (±15.15) years. Univariate analysis demonstrated four variables with statistical significance: age>65 years, inguinoscrotal hernia, neo-plastic status, and anticoagulant use. When introduced into the multivariate analysis, we noted that only two variables, age > 65 years (OR=4.183, 95% CI [1.289, 13.572], p=0.017) and use of anticoagulants (OR=38.876, 95% CI [1.305, 1158.011], p=0.035) reached statistical significance.

Conclusion: This study demonstrates that when we refer to bilateral inguinal hernia repair, patients aged > 65 years are at risk of having an open procedure at least fourfold more than patients aged < 65 years. In addition, the use of anticoagulants increases the risk of open hernia repair 38 times more than that of minimally invasive repair for the same age group. Interestingly, in our study, hernia characteristics were not found to be associated with open hernia repair and age > 65 years. In

our study we found that age > 65 years is associated with electing open hernia repair over minimally invasive repair, which can be linked to age-related risk factors. Further re-search is needed to investigate the impact of age and age-related risk factors on surgical outcomes of bilateral inguinal hernia repair.
Key words: inguinal hernia, age, bilateral, Rives, Stoppa, Lichtenstein, total extraperitoneal approach (TEP)