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Laparoscopic Inguinal Hernia Repair: Transabdominal Preperitoneal or Totally Extraperitoneal? Results of a 14-year Prospective Study

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Abstract

Background: Laparoscopic inguinal hernia repairs are most commonly either transabdominal preperitoneal (TAPP) or totally extraperitoneal (TEP) operations. The indications and comparative outcome data for both approaches are often conflicting and thus we sought to compare the two.

Methods: 678 consecutive laparoscopic inguinal hernia repairs (190 TAPP and 488 TEP) were prospectively recorded onto a database from June 2004-December 2018. Age, gender, hernia characteristics, operative times, complication and 12-month recurrence rate data were compared.

Results: 49.5% of TAPP repairs were recurrent hernias, and 95.5% of TEP repairs were bilateral hernias. TAPP patients were significantly older than TEP patients (60.65 versus 55.60, $p<0.01$). Unilateral TAPP repairs had a significantly shorter operative time than unilateral TEP repairs (50.94 versus 65.71 minutes, $p=0.01$). There was no significant difference in overall complication rate between TAPP and TEP repairs (6.84% versus 7.38%, $p=0.87$), and this was consistent across different hernia groups. TAPP repairs recurred at a significantly higher rate than TEP repairs (3.16% versus 0.61%, $p=0.02$) overall, but recurrence rates were not significantly different when broken down by hernia group.

Conclusions: Applying the broad principle of utilizing the TAPP approach for recurrent hernias and the TEP approach for bilateral hernias, outcomes from both operations are similar.

Key words: inguinal hernia, laparoscopy, transabdominal preperitoneal, totally extraperitoneal, surgical outcomes