

Evolution of Inguinal Hernia Management in a Romanian Emergency County Hospital: A Single-Centre Experience

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Abstract

Background: Inguinal hernia repair is one of the most frequently performed procedures in general surgery. During the last decade, wider use of mesh-based open techniques and the introduction of laparoscopic TEP/TAPP have progressively changed practice, while the COVID-19 pandemic temporarily shifted case-mix toward emergencies.

Material and Method: We conducted a retrospective, longitudinal, single-center study of 1,760 adult patients (≥ 18 years) admitted for inguinal hernia to Surgical Clinic No. I, Emergency County Hospital Târgu Mureş, between July 2013 and December 2021. Demographic data, admission type, incarceration, surgical approach, anesthesia and length of stay (LOS) were analyzed. Descriptive statistics and Welch t-tests were used for comparisons, and a multivariable logistic regression model was fitted to identify independent predictors of prolonged length of stay.

Results: Male patients predominated (91.8%), with a median age of 61 years. Elective admissions accounted for 77.7% of cases, while 22.3% were emergencies. Laparoscopic repairs increased from 0.9% in 2013 to almost 30% in 2018-2019, then decreased to ~20% during the COVID-19 period. Open repair remained dominant (84.9%). Mean LOS was 3.31 days and was significantly longer in emergency versus elective cases (3.98 vs 3.12 days), open versus laparoscopic repairs (3.52 vs 2.19 days) and incarcerated versus non-incarcerated hernias (4.13 vs 3.22 days) (all $p < 0.001$).

Conclusions: Our clinic followed the international trend from non-mesh open to mesh and laparoscopic techniques. Emergency presentation, incarceration and open surgery were each associated with prolonged hospitalization, while the COVID-19 pandemic temporarily reduced elective and laparoscopic repairs.

Keywords: inguinal hernia, laparoscopic hernia repair, Lichtenstein, incarceration, COVID-19, elective vs emergency