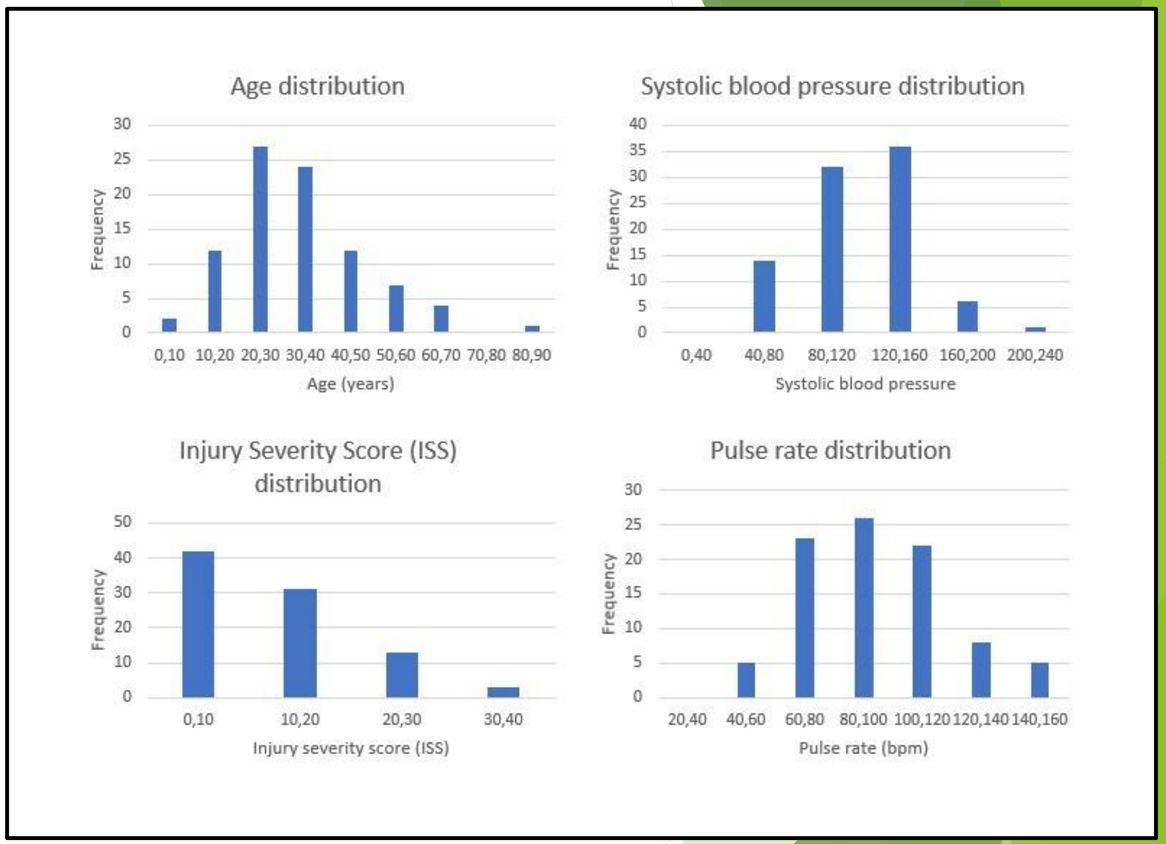
USE OF LAPAROSCOPIC SURGERY IN THE MANAGEMENT OF TRAUMATIC COLON AND RECTAL INJURIES

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Introduction:
Laparoscopy is increasingly used in the operative management of abdominal trauma. We aimed to study characteristics of patients in the National Trauma Databank (NTDB) who undergo laparoscopic surgery for traumatic colorectal injuries within 1 day of presentation.

Methodology:
Traumatic colon and rectal injuries were identified for years 2013-2015 using ICD-9 codes. Subjects with missing data or cardiac arrest at time of arrival were excluded. Patients undergoing laparoscopic colon or rectal surgery within one day of presentation were identified.
Data was collected for age, gender, race, injury severity score (ISS), pulse rate, systolic blood pressure (SBP), respiratory rate (RR) and length of stay (LOS) and mortality. Incidence was analyzed for acute kidney injury (AKI), acute respiratory distress syndrome (ARDS), deep vein thrombosis (DVT), pulmonary embolism (PE), pneumonia, organ space surgical site infection (SSI), deep SSI, severe sepsis, superficial SSI, unplanned intubation and unplanned return to OR.
Statistical analysis was conducted using SPSS for windows.

Results:
Of 2,598,467 patients, 8434 (0.32%) sustained a colonic or rectal injury. 89 (1.0%) patients underwent laparoscopic surgery. 88.1% were male.
Ages ranged from 7-86 years with median 32 years and interquartile range of 18 (24-42 years).
ISS ranged from 9-38 with median 13 and interquartile range of 9 (9-18).
Mean SBP ranged from 41-220 mmHg with median 120 mmHg and interquartile range 44 (96-140 mmHg).
Mean pulse rate ranged from 52-155 bpm with median 92 and interquartile range of 35 (77-112 bpm).
Mean RR ranged from 10-58 per minute with median 20 and interquartile range of 6 (18-24 per minute).
Incidence of post-operative morbidity were as follows: AKI (5.6%), ARDS (1.1%), DVT (3.4%), PE (1.1%), pneumonia (3.4%), organ SSI (4.5%), deep SSI (5.6%), severe sepsis (2.2%), superficial SSI (3.4%), unplanned intubation (1.1%) and unplanned return to OR (3.4%). Mean LOS was 15.0 days.
6 patients (6.7%) died subsequently. Non-survivors appeared to have higher ISS (23.3 vs 14.4;p=0.09) although this did not reach statistical significance.



Conclusion:
Majority of patients undergoing laparoscopic surgery for traumatic colon or rectal injuries appear to be young or middle aged with ISS scores below 15 without major hemodynamic instability (SBP > 90 mmHg, pulse < 100 bpm). Patients with higher ISS should be approached with caution.