The effect of Indocyanine Green (ICG) during Laparoscopic Cholecystectomy: A single institution study

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INTRODUCTION

- Indocyanine Green (ICG) has been shown to facilitate anatomy delineation during laparoscopic cholecystectomy (LC)
- There's some evidence that ICG use may decrease bile duct injuries, but less is known about its impact on operative times and readmission rates
- The goal of this study was to evaluate the impact of ICG use on perioperative outcomes

METHODS

Retrospective cohort study

- Electronic medical records data (2017 – 2023)
- 1609 patients who underwent LC with or without ICG use

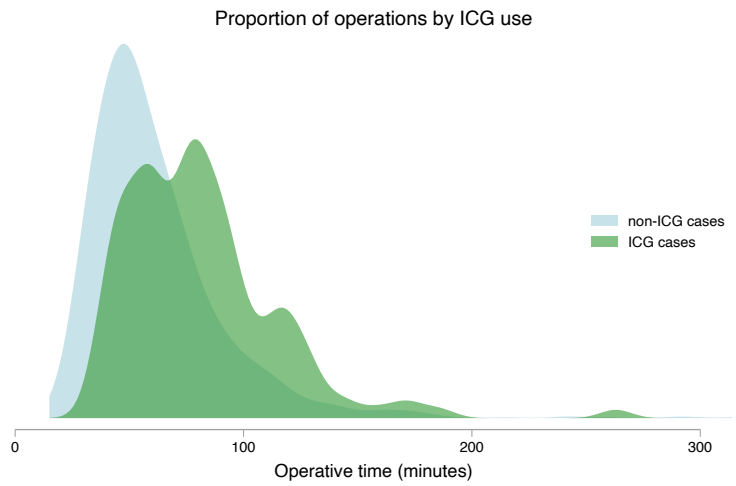
Outcomes

- Primary: operative time (minutes)
- Secondary: Readmission at 30 days

Statistical analysis

- Mixed effects model using propensity score matching to address confounding and balance baseline characteristics of the cohorts

RESULTS



- Median operative time was 56 minutes (IQR 43-75).
- 137 patients received ICG
- Operative time was 11 minutes longer in patients who received ICG compared to those who did not (95% CI: 2.9 – 20.0, p=0.009).
- Readmission at 30 days post-operatively was 45% less likely in those who received ICG compared to those who did not, although this did not reach significance (OR = 0.55 95% CI: 0.20 - 1.51, p=0.248).

CONCLUSIONS

Operative time was only slightly longer in operations where ICG was used

This small difference does not have clinical implications and should not preclude the use of ICG in LC