THE USE OF INDOCYANINE GREEN AND ITS USEFULNESS IN LAPAROSCOPIC COLORECTAL SURGERY - EXPERIENCE OF AN ONCOLOGIC HOSPITAL IN BRASIL

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INTRODUCTION

- Anastomotic leaks are dreaded complications in colorectal surgery that lead to a rise in the mortality rates and an increase in the costs of the total treatment.
- The feasibility of the use of indocyanine green (ICG) for near-infrared fluorescence angiography has been demonstrated in several studies. However, data of its clinical use in Latin America are still limited.

METHODS

This is a retrospective, single center, observational cohort study, with patients that underwent laparoscopic colorectal surgery with intraoperative ICG (ICG group) from December 2017 until June 2022, and compared with a historical database of laparoscopic colorectal surgeries without ICG (control group).

Included patients were 18y or older, with confirmed (or precursor of) colorectal cancer.

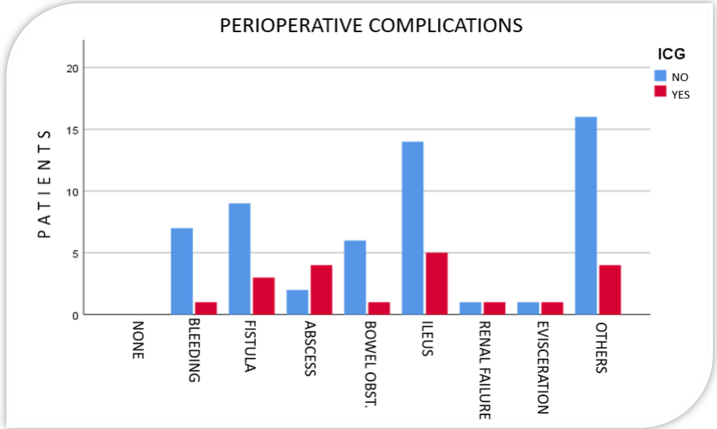
All colorectal surgeries were elective, with intestinal anastomosis, with or without divert ostomy.

Anastomotic leakage was confirmed with CT scan.

All surgeries were performed at the Hospital de Amor Barretos-SP, Brazil

RESULTS

- A total of 684 patients (199 in the ICG group and 475 in the control group) registered in a database from 2016 to 2022 were included.
- Base line characteristics were similar in both groups. Anastomotic leakage was found in 1,5% of the ICG group (3/199) and in 2,9% in the control group (14/475) without statistical association (p>0,05).
- There were no changes in the level of anastomosis after ICG fluorescence angiography.
- No statistical association among the other complications (intraoperative bleeding, ileus, bowel obstruction, etc.) was found.
- No allergic reaction was reported. No statistical difference was found in total surgical time and intraoperative bleeding between both groups.



CONCLUSION

Although there is evidence of fluorescence angiography with indocyanine green potential in helping reduce the incidence of colorectal leaks, we found no statistical difference in the current study.

Fluorescence angiography with indocyanine green is a safe and feasible tool for routine use in colorectal surgery, that could be helpful in some challenging cases to assessed doubtful blood flow perfusion.