

Evaluation of perioperative anesthesia care in patients undergoing colorectal resection with laparoscopic or robotic technique within ERAS protocol – a quality audit.

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Introduction: Complications are decreased when colorectal resection is performed with minimally invasive surgery and perioperative Enhanced Recovery After Surgery protocol (ERAS).

Aim: To evaluate perioperative anesthesia care in patients undergoing colorectal resection associated to laparoscopic or robotic surgery within ERAS-protocol.

Material and Methods: Data from 119 patients were extracted from the ERAS registry for analysis of primary and secondary outcome. Patients from ERAS registry were matched with Svenskt perioperativt register (**SPOR**) to analyze secondary outcomes and perform a quality validation. 47 patients were matched between both registries and quality validation was performed on 23 randomly chosen patients.

Results: 72 patients were operated with robotic technique and 47 were operated with laparoscopic. Average time until discharge was 4.3 days with robotic surgery and 8.1 days with laparoscopic surgery. VAS day 1 was 3.67, average surgery length was 352 min and Clavien-Dindo score were 0.53 for the robotic technique. VAS day 1 was 3.21, average surgery length was 271 min and Clavien-Dindo score were 0.79 for the laparoscopic technique. Inconsistencies between ERAS registry and TakeCare/Orbit were found in the quality validation.

Conclusion: This retrospective cohort study showed that robotic surgery seems to have advantage in different outcomes, shorter number of days until discharge and diminished grade of complications. Robotic surgery was associated with longer surgery and anesthesia time. This study indicates robotic surgery is not inferior to laparoscopic surgery in blood loss. Further studies are warranted to assess the benefits of this technique.

Keywords: Colorectal resection; Enhanced recovery after surgery; perioperative care; minimally invasive surgery.