

Comparison of Opioid Prescriptions Among Outpatient Robotic, Laparoscopic and Open Ventral Hernia Repair

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Background

- Reducing the use of perioperative opioids is important to avoid side effects and long-term dependence.
- The effect of operative approach on opioid use in ventral hernia repair (VHR) is incompletely understood.
- Our objective was to **compare rates of opioid prescription** among robotic-assisted (RVHR), laparoscopic (LVHR), and open ventral hernia repair (OVHR) at various postoperative timepoints.

Methods

- Retrospective cohort study from US insurance claims database (2018-2022)
- Outpatient abdominal/ventral hernia repair patients divided into two groups:
 - larger and more complex repairs coded as ventral or incisional
 - smaller hernia coded as epigastric, umbilical or spigelian
- Opioid prescription at postoperative day (POD) 0-14, POD 15-30 and POD 90-180 were compared by surgical approaches after 1:2 propensity score matching (PSM)

Results

Incisional, ventral hernia repair group (Figure 2):

- RVHR had similar opioid use relative to LVHR & OVHR POD 0-14, but lower rates of opioid refill POD 15-30.
- Compared to OVHR, LVHR patients were slightly more likely to refill opioids POD 15-30.
- Surgical approaches were similar in long-term (POD 90-180) opioid refills.

Umbilical, epigastric, and spigelian repair group (Figure 3):

- RVHR patients were less likely to refill opioids POD 15-30 and in the long-term (POD 90-180) relative to LVHR.
- However, RVHR and OVHR had similar opioid fill rates in the short- and long-term periods, and there was no difference when directly comparing LVHR and OVHR.

Figure 1. Patient Population

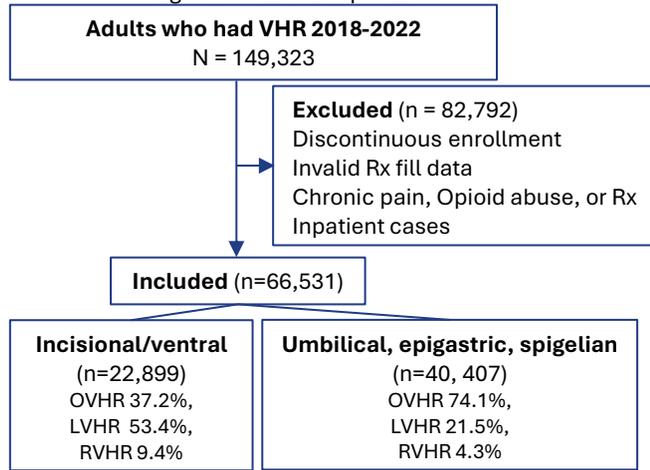


Figure 2. Incisional/Ventral repair

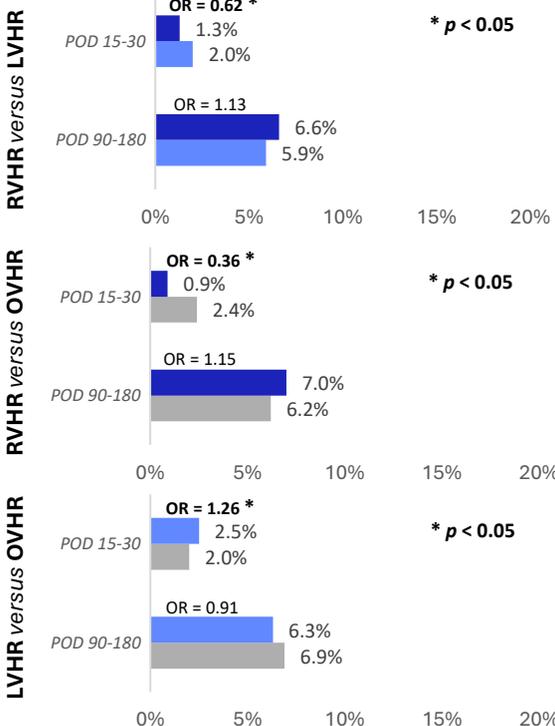
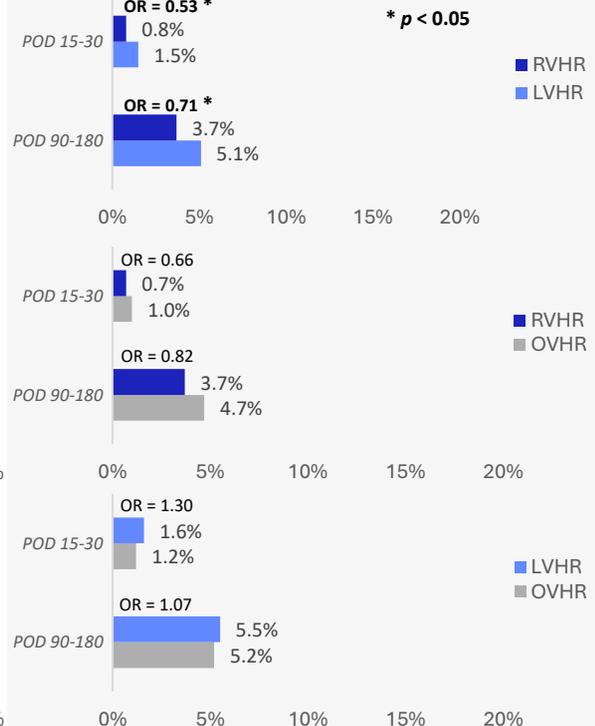


Figure 3. Umbilical, Epigastric, or Spigelian Repair



Conclusions

Opioid prescription rates for Incisional/Ventral hernia repair are similar between surgical approaches in the early postoperative period, however RVHR was associated with fewer opioid refills than LVHR and OVHR from POD15-30.