The Follow-Up Dynamics: Distinct Patterns in Ventral Hernia Repair Across Time in a Single-Center Cohort Study

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Introduction

- ✓ **Ventral hernia repair** is a widely performed surgical procedure aimed at closing defects in the abdominal wall. It is common due to the prevalence of abdominal hernias, yet the recovery process can vary significantly between patients, making postoperative care a key focus.
- ✓ **Postoperative Follow-Up**: While many surgeons consider short-term follow-up (e.g., within the first few months) sufficient for monitoring recovery, existing research suggests that longer-term follow-up is essential for identifying late complications and ensuring complete recovery, which may impact patient outcomes.
- ✓ **Challenges in Follow-Up**: Several factors complicate effective postoperative follow-up. Patient-related issues, such as socioeconomic factors (e.g., access to healthcare, financial constraints) and comorbid conditions (e.g., diabetes, obesity), can influence a patient's ability to attend follow-up visits. Additionally, the specific characteristics of the hernia (size, location, complexity) and postoperative complications (e.g., recurrence, infections) contribute to the variability in follow-up needs.
- ✓ **Objective**: The aim of this study was to analyze and compare the differences in patient demographics, hernia characteristics, and postoperative outcomes between groups of patients who had varying lengths of follow-up periods. By understanding these differences, we hope to identify patterns that could inform future follow-up protocols for optimal patient care.

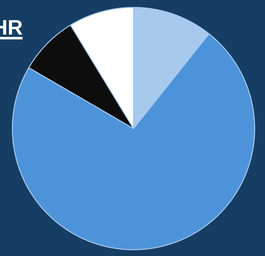
Methods

- ✓ This was a **retrospective**, **single-center** study that analyzed patients who underwent Ventral Hernia Repair (VHR) at St. Joseph's Hospital and Medical Center.
- ✓ **Grouping of Patients**:
  - **Four groups** based on the **duration follow-up**:
    - ✓ No follow-up;
    - Less than 6 months;
    - Between 6 months and 1 year;
    - More than 1 year.
    - *Patients who had surgery within the last year were excluded from the study.*
- ✓ **Data Collection and Outcomes:**
- ❑ **Demographics**: Race, age, BMI;
- ❑ **Comorbidities**: Presence of other health conditions;
- ❑ **Hernia Details**: Size, location, type of hernia;
- ❑ **Surgical Factors**: Type of surgery, complications during surgery;
- ❑ **Postoperative Complications**: Recurrence, infections, other complications.

- *All statistical analyses were performed using R software.*

391 patients undergoing VHR

- **No follow-up FU:** 42 patients (10.7%)
- **Less than 6 months FU:** 284 patients (72.6%)
- **6 months to 1 year FU:** 31 patients (7.9%)
- **More than 1 year FU:** 34 patients (8.7%)



✓Demographic and Preoperative Clinical Findings:

White patients were more likely to have **longer follow-up** periods compared to other races (p = 0.02).

Liver Disease: **Cirrhosis or liver disease** was significantly more prevalent in the no FU group (p = 0.02).

Preoperative hernia **symptoms** and **recurrent** hernias were more commonly found in the longer FU groups (p = 0.04).

✓Hernia and Perioperative Factors:

Umbilical hernias = more common in the **no FU** group (p = 0.04).
Epigastric hernias = more common in the **longer FU** groups (p = 0.03).

✓ Operative Factors and Postoperative Complications:

Longer operative times (p = 0.02)
Longer hospital stay (p < 0.001)

Higher visual analog scale (p = 0.04)
Clinical complications (p = 0.008)

Increased use of drains (p = 0.004)
Presence of pain (p = 0.03)

= Longer Follow-up

Conclusions

- ✓ **Racial Disparities in Follow-Up**: Patients with limited follow-up, especially those with no follow-up or follow-up of less than six months, were predominantly from underrepresented racial groups.
- ✓ **Hernia Type**: Umbilical hernias were more common in the no follow-up group. Epigastric hernias were more prevalent in patients with longer follow-up.
- ✓ **Preoperative Symptoms and Surgical Factors**: Patients with preoperative symptoms and those with recurrent hernias were more likely to be in the longer follow-up groups. Longer operative times and length of stay (LOS) were associated with patients who had longer follow-up periods.
- ✓ **Gaps in Care and Follow-Up Retention**: The findings underscore potential gaps in care, particularly for marginalized populations. There is a need for strategies aimed at improving follow-up retention, especially for underrepresented groups, to ensure comprehensive post-operative management.
- ✓ **Implications for Health Outcomes**: Enhancing follow-up retention is critical for improving overall health outcomes and ensuring that patients receive consistent and complete postoperative care.

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