Predictors of VTE-Related Readmission After Ventral Hernia Repair:

A National Readmissions Database Study

R. Matthew Jensen, BS[1]; Carlos Balthazar da Silveira, MD[2]; Ana Dias Rasador, MD[2]; Jonathan Scott Selway, BS[1]; Paul Zakarian, BS[1]; Austin A. Charles, BS[1]; Alexandra Janssen, MD[1]; Agnes Premkumar, MD[1]; Robert Easter, BS[1]; Vikram Deka, MD[2]; Conrad Ballecer, MD[2]; Thomas Gillespie, MD, FACS[1]

[1]Creighton University School of Medicine – Phoenix
[2]St. Joseph's Hospital and Medical Center

Background

- Ventral hernia repair (VHR) is a common surgical procedure, and venous thromboembolism (VTE) events are recognized complications following surgery.
- VTE events after VHR are associated with substantial clinical, emotional, and financial burdens.
- **Our objective was to identify patient- and hospital-level predictors of 30-day VTE-specific readmission following VHR.**

Methods

National Readmission Database searched for patients who underwent VHR.

Outcomes

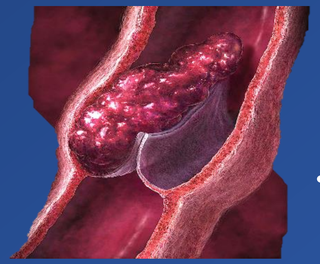
- Unplanned 30-day VTE-specific readmission following index VHR.
- Secondary Outcome: All-cause 30-day readmission following index VHR.

> **Statistics**: Weighted logistic regression.

385,306 patients

Baseline Characteristics:
- Mean Age: 60.2 years
- Sex: 54.5% Female

Primary Payer (%, SE)
- Medicaid: 15.4 (0.15)
- Medicare: 46.6 (0.17)
- Private: 30.3 (0.17)
- Self-Pay: 4.28 (0.08)



- **Overall 30-day Unplanned Readmission: 11.7%**
- **VTE-Specific 30-day Readmission: ~0.24%**

Summary of Findings

Category	Characteristic / Variable	Outcome Measured	Association (Odds Ratio, 95% CI)
Patient-Level Predictors	Age > 45 years	All-cause readmission	OR 1.53 (1.08–2.15); OR 2.03 (1.34–3.07) (vs 18-44 years)
	Female Sex	VTE-specific readmission	OR 1.24 (1.01–1.53)
	Higher Charlson Comorbidity Index (CCI)	All-cause readmission	OR 1.42 (CCI=2); OR 1.95 (CCI>3) (vs CCI 0-1)
Discharge Disposition	Discharged to Short-Term Facility/Home Health	All-cause readmission	OR 2.26 (1.86–2.74)
Surgical Approach	Minimally Invasive versus open	VTE-specific readmission	OR 0.69, p=0.005
Postoperative Complications	Respiratory Failure	VTE-specific readmission	OR 1.43 (1.06, 1.93); p<0.001

Conclusion

- Older age and female sex independently predicted VTE-specific 30-day readmission.
- Markers of medical complexity and need for post-acute care strongly predicted all-cause readmission.
- Our analysis supports intensified perioperative VTE risk assessment and prophylaxis for older and medically complex VHR patients and closer post-discharge surveillance for those requiring non-home disposition.

References

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