Deficiency in Detail Among Ventral Hernia Repair Operative Notes and The Impact on Patient Outcomes

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Background

- Ventral hernia repairs (VHR) are one of the most common surgical procedures in the US with roughly 600,000 cases annually.
- Operative Notes are the definitive method of obtaining information regarding the details of a surgery and are critical in the postoperative care plan.
- Previous work has shown that ventral hernia repair operative reports are poorly-detailed, however, the relationship between operative report detail and patient outcomes is unknown.
- Key details includes hernia type, hernia recurrency history, previous mesh information, preoperative reducibility, operative method, fascial defect size, hernia sac removal detailed, hernia contents, documentation of component separation, mesh inclusion information, mesh location, mesh fixation method, primary fascial closure detail , suture type, and skin flap information.

Objective

- This study aims to evaluate the prevalence of highly-detailed VHR operative reports, identify factors associated with operative report detail, and assess if there is an association between operative report detail and postoperative outcomes
- It is hypothesized that less than 50% of operative reports will be highly-detailed and that highly-detailed reports are associated with improved clinical outcomes

Methods

Multi-institutional, retrospective, cross-sectional observation review of operative reports describing VHR was performed

1,011 VHR operative reports were reviewed from 693 surgeons across 517 facilites in 50 states

Reports that had complete author demographic data were included

Reports that described other types of hernia repair or had missing data were excluded

Highly-detailed operative reports were defined as reports that included atleast 70% of the recommended details

Data extracted: demographic data, medical history, surgical history, operative hernia details and clinical outcome.

Results

Table 1. Association of Operative Report Quality and Postoperative Outcomes

Outcome	Total (n=1011)	Poorly-Detailed (n=647)	Highly-Detailed	P-value
Surgical site infection	113 (11.2%)	86 (13.3%)	27 (7.4%)	0.004
Readmission	734 (72.6%)	509 (78.7%)	225 (61.6%)	<0.001
Recurrence	628 (62.1%)	428 (66%)	200 (54.9%)	<0.001
Reoperation	739 (73.1%)	513 (79%)	226 (62.1%)	<0.001
Death	2 (0.2%)	1 (0.2%)	1(0.3%)	0.170

Table 2. Full Regression with Each Outcome Included

Outcome	Odds Ratio	95% Confidence Interval	P-value
Surgical site infection	0.268	0.14-0.50	<0.001
Readmission	0.553	0.38-0.80	0.002
Recurrence	0.802	0.57-1.13	0.212
Reoperation	0.506	0.35-0.74	<0.001
Death	1.188	0.07-19.58	0.904

Discussion

- In this multi-institutional study of over 1000 VHR operative reports, there was a substantial deficiency in the level of detail within them.
- Most operative reports failed to report at least 70% of recommended information.
- Patients with poorly-detailed operative reports had worse clinical outcomes including significantly more surgical site infections, hospital readmissions, and reoperations.
- As development and subsequent implementation of templated operative reports becomes more common across the healthcare industry, it is imperative that these templates and standards be developed with an adequate amount of detail and quality.

Conclusion

- Highly-detailed operative reports were associated with lower rates of recurrence, reoperations, readmissions, and SSIs. These findings favor the development/implementation of a standardized operative report template for ventral hernia repair

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