Consensus Guidelines in Ventral Hernia Repair

The Chasm Between Recommendation and Practice

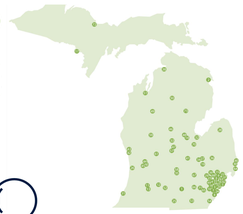
Desmond Huynh, MD; Ryan Howard, MD, MS; Anne Ehlers, MD, MPH; Sean O'Neill, MD, PhD; Jenny Shao, MD; Michael Englesbe, MD; Justin Dimick, MD, MPH; Dana Telem, MD, MPH

MICHIGAN MEDICINE
UNIVERSITY OF MICHIGAN

Background

The management of ventral hernias is highly variable. To achieve improved outcomes, surgical societies have written best practice guidelines to establish a standardized approach for hernia care. While these guidelines are widely available, the degree to which they have been implemented in clinical practice is unknown.

MSQC COHR
MICHIGAN SURGICAL QUALITY COLLABORATIVE
CORE OPTIMIZATION HERNIA REGISTRY



Population-level patient, hernia, and operative characteristics

30-day outcomes:
Morbidity/Mortality
1-Year PROs:
- Ventral Hernia Recurrence Inventory
- HerQLes
- Pain 3a

Data abstracted by professionally trained nurses

Data annually audited for accuracy and quality

Methods

The VHOC guidelines for Ventral Hernia Management were published in 2017 following deliberation of an expert panel as to essential elements of hernia care. Adherence to these recommendations was then evaluated in patients from the Michigan Surgical Quality Collaborative Core Optimization Hernia Registry (MSQC COHR). The registry is a representative, random sample of adult patients from 70 Hospitals across the state of Michigan and it encompasses surgeries performed between January 1, 2020 to March 31, 2023.

Recommendation	Clinical Adherence
Smoking	
"Avoid elective surgery on current smokers"	11108 of 13842 (80.2%) cases were performed on patients who had not smoked within a year of surgery.
Obesity	
"Obesity [body mass index (BMI) ≥ 30 kg/m2 is associated with poor outcomes after VHR"	5609 of 13842 (40.5%) of cases were performed on patients with BMI <30.
"Avoid elective surgery in patients with BMI ≥ 50"	13509 of 13842 (98.3%) of cases were performed on patients with BMI <50.
Diabetes	
"There is an increased risk of complications in patients with HbA1c > 6.5%"	2160 of 2944 (73.3 %) of patients had a HbA1c <6.5.
"Avoid elective surgery on patients with HbA1c > 8.0%"	2801/2944 (95.1%) of patients had a HbA1c <8.
Mesh	
"Mesh reinforcement is recommended for elective repair of ventral incisional hernias and primary VH ≥ 2 cm"	In elective, clean, cases with defect with ≥ 2 cm 3266 of 3768 (86.3%) were repaired using mesh.
"Mesh reinforcement should be considered for emergency VHR, open repair of primary hernias <2 cm width, and in the face of contamination"	In hernias with defect width >2 cm repaired emergently 23 of 52 (44.2%) used permanent synthetic mesh. hernias >2 cm repaired in a contaminated setting, 54 of 147 (36.7%) employed permanent synthetic mesh.

REVIEW PAPER

Ventral Hernia Management

Expert Consensus Guided by Systematic Review

Mike K. Liang, MD, Julie L. Holihan, MD,* Kamal Itani, MD,† Zeinab M. Alawadi, MD, MS,* Juan R. Flores Gonzalez, MD,* Erik P. Askenasy, MD,‡ Conrad Ballecer, MD,§ Hui Sen Chong, MD,¶ Matthew I. Goldblatt, MD,|| Jacob A. Greenberg, MD,** John A. Harvin, MD,* Jerrod N. Keith, MD,¶ Robert G. Martindale, MD, PhD,†† Sean Orenstein, MD,†† Bryan Richmond, MD,‡‡ John Scott Roth , MD,§§ Paul Szotek, MD,¶¶ Shirin Towfigh, MD,|||| Shawn Tsuda, MD,*** Khashayar Vaziri, MD,††† and David H. Berger, MD‡*

Recommendation	Clinical Adherence
Mesh	
"Sublay is the optimal mesh location in open, elective VHR, but there is a role for other positions of mesh placement"	In elective repairs using an open approach, 3476 of 4836 (42.3%) were repaired using mesh placed in the sublay position
Component Separation	
"Avoid component separation without mesh reinforcement"	In cases requiring myofascial release 742 of 788 (94.2%) employed mesh.
"Surgeons should be cautious using complex procedures (such as component separation) in emergency settings"	733 of 788 (93%) myofascial releases were performed in elective setting. 55 of 788 (6.9%) were performed in emergent cases.

Conclusion

On a population level, VHOC guidelines were generally well adhered to. Two areas; however, were identified for improvement. Based on these findings, statewide and society initiative should continue to specifically focus on preoperative optimization and technique related initiatives..

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