



Long-term outcomes of ventral hernia repair: Effect of patient, hernia, and technical characteristics on recurrence

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EXCEPTIONAL CARE. WITHOUT EXCEPTION.

Background

In 2011, the VA New England surgical workgroup within 5 VA medical centers established the **New England VA Hernia Registry (NEVAHR)** to **prospectively** examine variation in ventral hernia repairs (VHR) and its impacts on postoperative outcomes.

Aim: Assess which technical, hernia, and patient characteristics were associated with long-term recurrence.

Methods

Data Collection: NEVAHR and VASQIP collected patient and hernia characteristics. Follow up was done by assessing notes, surgeries and imaging from date of operation to 2024.

Outcomes:

- Primary: hernia recurrence
- Secondary: surgical site occurrences (infection, hematoma, seroma)

Inclusion Criteria:

- All abdominal wall hernia repairs entered into NEVAHR, excluding inguinal and umbilical hernias
- Timeframe: 2011-2023
- Location: 5 New England VA hospitals

Analysis: Logistical regression

Results

Overall Recurrence

Category	No Recurrence	Recurrence	OR (95% CI)	P-value
Gender, n (%)	542 (79.8)	139 (24.4)	-	-
Female, n (%)	117 (78.4)	42 (20.1)	1.00 (ref)	-
Male, n (%)	425 (79.7)	97 (24.4)	1.00 (ref)	-
Location, n (%)	131 (78.7)	31 (23.7)	1.00 (ref)	-
Location 1, n (%)	100 (78.5)	24 (23.8)	1.00 (ref)	-
Location 2, n (%)	31 (79.0)	7 (22.6)	1.00 (ref)	-
Location 3, n (%)	10 (78.0)	3 (30.0)	1.00 (ref)	-
Location 4, n (%)	10 (78.0)	3 (30.0)	1.00 (ref)	-
Location 5, n (%)	10 (78.0)	3 (30.0)	1.00 (ref)	-
Mesh Type, n (%)	472 (88.1)	117 (28.0)	1.00 (ref)	-
Mesh Type 1, n (%)	381 (80.7)	93 (23.4)	1.00 (ref)	-
Mesh Type 2, n (%)	91 (19.3)	24 (24.2)	1.00 (ref)	-
Mesh Type 3, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 4, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 5, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 6, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 7, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 8, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 9, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 10, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 11, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 12, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 13, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 14, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 15, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 16, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 17, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 18, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 19, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 20, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 21, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 22, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 23, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 24, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 25, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 26, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 27, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 28, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 29, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 30, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 31, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 32, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 33, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 34, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 35, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 36, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 37, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 38, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 39, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 40, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 41, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 42, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 43, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 44, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 45, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 46, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 47, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 48, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 49, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 50, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 51, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 52, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 53, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 54, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 55, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 56, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 57, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 58, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 59, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 60, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 61, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 62, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 63, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 64, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 65, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 66, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 67, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 68, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 69, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 70, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 71, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 72, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 73, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 74, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 75, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 76, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 77, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 78, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 79, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 80, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 81, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 82, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 83, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 84, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 85, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 86, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 87, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 88, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 89, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 90, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 91, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 92, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 93, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 94, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 95, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 96, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 97, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 98, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 99, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 100, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-

Risk Factors for Mesh Recurrence

Category	No Recurrence	Recurrence	OR (95% CI)	P-value
Gender, n (%)	472 (88.1)	117 (28.0)	-	-
Female, n (%)	100 (88.1)	24 (24.2)	1.00 (ref)	-
Male, n (%)	372 (88.1)	93 (23.4)	1.00 (ref)	-
Location, n (%)	131 (78.7)	31 (23.7)	1.00 (ref)	-
Location 1, n (%)	100 (78.5)	24 (23.8)	1.00 (ref)	-
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Mesh Type 50, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 51, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 52, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
Mesh Type 53, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
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Mesh Type 56, n (%)	10 (2.1)	3 (3.0)	1.00 (ref)	-
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Mesh Type 60, n (%)	10 (2.1)	3 (3.0)		