

Association of Changes in HerQLes Scores with Objective Hernia Outcomes

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Disclosures

- None



Background



Following ventral hernia repair (VHR):

There are objective & subjective measures of success



Purpose of the study:

To determine if there is an association between 30-day wound events (objective) and changes in the hernia-related quality-of-life (HerQLes) score (subjective) using the ACHQC database



Hypothesis:

Patients who do not experience a 30-day wound event have a greater improvement in their HerQLes score over the short-term

Methods: Inclusion Criteria

ACHQC database

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graph TD; A[ACHQC database] --> B[2012-2023]; B --> C[Adult patients]; C --> D[Ventral hernia repair]; D --> E[30-day follow-up data available];
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2012-2023

Adult patients

Ventral hernia repair

30-day follow-up data available

Methods

- The 30-day wound events investigated:
 - Surgical site infection (SSI)
 - Surgical site occurrence (SSO)
 - SSO requiring procedural intervention (SSOPI)
- The HerQLes questionnaire:
 - 12 questions that quantify the effect of one's abdominal wall on his/her activities of daily living on a scale of 1-6
 - 6 corresponding to the ++ impact on quality of life
- Propensity score matched analysis



HerQLes

Strongly Disagree
Moderately Disagree
Slightly Disagree
Slightly Agree
Moderately
Strongly Agree

For the following statements, please circle the number that is most appropriate for you.						
1. My abdominal wall has a huge impact on my health	1	2	3	4	5	6
2. My abdominal wall causes me physical pain	1	2	3	4	5	6
3. My abdominal wall interferes when I perform strenuous activities, e.g., heavy lifting	1	2	3	4	5	6
4. My abdominal wall interferes when I perform moderate activities, e.g. bowling, bending over	1	2	3	4	5	6
5. My abdominal wall interferes when I walk or climb stairs	1	2	3	4	5	6
6. My abdominal wall interferes when I dress myself, take showers and cook	1	2	3	4	5	6
7. My abdominal wall interferes with my sexual activity	1	2	3	4	5	6
8. I often stay home because of my abdominal wall	1	2	3	4	5	6
9. I accomplish less at home because of my abdominal wall	1	2	3	4	5	6
10. I accomplish less at work because of my abdominal wall	1	2	3	4	5	6
11. My abdominal wall effects how I feel every day	1	2	3	4	5	6
12. I often feel blue because of my abdominal wall	1	2	3	4	5	6



Results

Total number of patients available: 125,029

Total number that met inclusion criteria: 43,874

Total number who experienced a wound event: 4,547

Total number who did not experience a wound event: 37,574

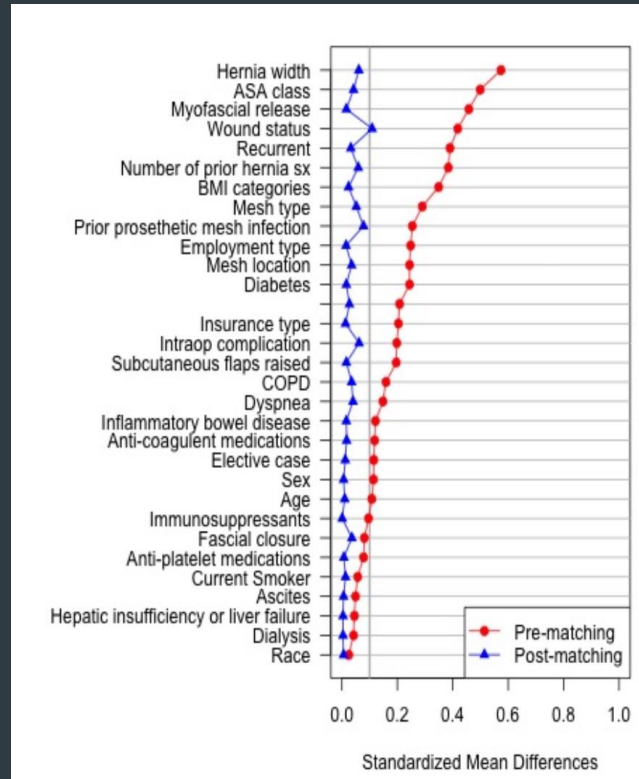
324 sites

353 surgeons

- 196 Academic
- 98 Private
- 57 Private practice with academic affiliation
- 2 Unknown



Results



Results



A total of **43,874** patients met inclusion criteria

- 1,224 (28%) patients experienced an SSI
 - Most common SSI: superficial SSI
- 3,587 (81%) patients experienced an SSO
 - Most common SSO: hematoma
 - Most common intervention: PO antibiotics
- 4,449(100%) experienced an SSOPi



Results: Patient Demographics

	No 30-day wound event N = 13,347	30-day wound event N = 4449	p-value
Sex			0.72
Female	52%(6990)	53%(2344)	
Male	48%(6357)	47%(2105)	
Race			0.21
White	85%(11308)	85%(3779)	
Non-white	15%(2039)	15%(670)	
Age, yrs			0.026
18-29.9	1.9%(255)	1.5%(68)	
30-39.9	8.2%(1088)	7.6%(338)	
40-49.9	16.2%(2166)	17.6%(782)	
50-59.9	25.9%(3452)	27.0%(1202)	
>60	47.9%(6386)	46.3%(2059)	
Current Smoker			0.44
Yes	10%(1382)	11%(479)	
No	90%(11965)	89%(3970)	
BMI (kg/m²)	33 (29,38)	34 (29, 38)	0.17
Length of Stay, days	3 (0, 5)	3 (1, 6)	< 0.001
Hernia Width, cm	8 (4, 13)	8 (4, 14)	< 0.001



Results: Patient Demographics

	No 30-day wound event N = 13,347	30-day wound event N = 4449	p-value
Hypertension			0.064
No	45%(5985)	43%(1924)	
Yes	55%(7362)	57%(2525)	
Diabetes			0.36
No	75%(9957)	74%(3288)	
Yes	25%(3390)	26%(1161)	
COPD			0.042
No	91.3%(12191)	90.3%(4019)	
Yes	8.7%(1156)	9.7%(430)	
Immunosuppresants			0.96
No	93.5%(12480)	93.5%(4159)	
Yes	6.5%(867)	6.5%(290)	
Recurrent			0.068
No	59%(7885)	58%(2559)	
Yes	41%(5462)	42%(1890)	



Results: Patient Demographics

	No 30-day wound event N = 13,347	30-day wound event N = 4,449	p-value
ASA Class			0.29
1	1.90%(253)	2.34%(104)	
2	28.77%(3840)	28.57%(1271)	
3	65.60%(8756)	64.82%(2884)	
4	3.60%(481)	4.11%(183)	
5	0.02%(3)	0.02%(1)	
None Assigned	0.10%(14)	0.13%(6)	
Wound Status			< 0.001
Clean	77.5%(10344)	73.9%(3286)	
Clean-contaminated	12.7%(1689)	13.0%(577)	
Contaminated	6.9%(924)	8.9%(396)	
Dirty/Infected	2.9%(390)	4.3%(190)	
Elective Case			0.5
No	4.1%(542)	4.3%(191)	
Yes	95.9%(12805)	95.7%(4258)	



Change in HerQLes for All Wound Events

	No 30-day wound event N = 13,347	30-day wound event N = 4,449	Combined N = 17,796	p-value
HerQLes Summary Score at Baseline	38 (18, 63)	33 (17, 58)	37 (18, 62)	<0.001
HerQLes Summary Score at 30 Day	57 (32, 82)	47 (27, 75)	55 (30, 80)	<0.001
Baseline to 30-days HerQLes: Summary score change	10.0 (-6.7, 28.3)	6.7 (-8.3, 25.0)	8.3 (-6.7, 28.3)	<0.001
HerQLes Summary Score at 6 Month	82 (57, 93)	75 (47, 92)	80 (55, 92)	<0.001
Baseline to 6 months HerQLes: Summary score change	30.0 (8.3, 53.3)	28.3 (10.0, 51.7)	30.0 (8.3, 51.7)	0.63
HerQLes Summary Score at 1 Year	83 (57, 93)	78 (48, 92)	83 (55, 93)	<0.001
Baseline to 1 yr HerQLes: Summary score change	33.3 (11.7, 55.0)	30.0 (8.3, 51.7)	31.7 (10.0, 55.0)	0.27

Change in HerQLes for SSI

	No 30-day wound event N = 13,347	30-day wound event N = 4,449	Combined N = 17,796	p-value
HerQLes Summary Score at Baseline	38 (18, 62)	30 (15, 52)	37 (18, 62)	<0.001
HerQLes Summary Score at 30 Day	55 (32, 80)	40 (21, 70)	55 (30, 80)	<0.001
Baseline to 30-days HerQLes: Summary score change	9.4 (-6.7, 28.3)	6.7 (-7.4, 25.0)	8.3 (-6.7, 28.3)	0.32
HerQLes Summary Score at 6 Month	82 (55, 93)	71 (42, 88)	80 (55, 92)	<0.001
Baseline to 6 months HerQLes: Summary score change	30.0 (8.3, 51.7)	33.3 (8.3, 54.2)	30.0 (8.3, 51.7)	0.41
HerQLes Summary Score at 1 Year	83 (57, 93)	68 (37, 92)	83 (55, 93)	<0.001
Baseline to 1 yr HerQLes: Summary score change	33.3 (11.7, 55.0)	26.7 (6.7, 53.3)	31.7 (10.0, 55.0)	0.38

Change in HerQLes for SSO

	No 30-day wound event N = 13,347	30-day wound event N = 4,449	Combined N = 17,796	p-value
HerQLes Summary Score at Baseline	38 (18, 62)	36 (17, 60)	37 (18, 62)	0.059
HerQLes Summary Score at 30 Day	55 (32, 80)	48 (27, 75)	55 (30, 80)	<0.001
Baseline to 30-days HerQLes: Summary score change	10.0 (-6.7, 28.3)	6.7 (-8.3, 23.3)	8.3 (-6.7, 28.3)	<0.001
HerQLes Summary Score at 6 Month	82 (55, 92)	77 (50, 92)	80 (55, 92)	0.009
Baseline to 6 months HerQLes: Summary score change	30.0 (8.3, 53.3)	28.3 (10.0, 51.7)	30.0 (8.3, 51.7)	0.43
HerQLes Summary Score at 1 Year	83 (55, 93)	82 (52, 93)	83 (55, 93)	0.17
Baseline to 1 yr HerQLes: Summary score change	33.3 (11.7, 55.0)	30.0 (8.3, 51.3)	31.7 (10.0, 55.0)	0.32

Change in HerQLes for SSOPI

	No 30-day wound event N = 13,347	30-day wound event N = 4,449	Combined N = 17,796	p-value
HerQLes Summary Score at Baseline	38 (18, 62)	30 (13, 55)	37 (18, 62)	<0.001
HerQLes Summary Score at 30 Day	55 (32, 80)	43 (21, 69)	55 (30, 80)	<0.001
Baseline to 30-days HerQLes: Summary score change	10.0 (-6.7, 28.3)	6.7 (-6.7, 25.0)	8.3 (-6.7, 28.3)	0.24
HerQLes Summary Score at 6 Month	82 (55, 93)	68 (42, 87)	80 (55, 92)	<0.001
Baseline to 6 months HerQLes: Summary score change	30.0 (8.3, 51.7)	26.7 (9.6, 51.7)	30.0 (8.3, 51.7)	0.67
HerQLes Summary Score at 1 Year	83 (57, 93)	69 (41, 92)	83 (55, 93)	<0.001
Baseline to 1 yr HerQLes: Summary score change	33 (10, 55)	27 (10, 47)	32 (10, 55)	0.11

Conclusion



Subjective and objective measures of success following VHR seem to be correlated with one another over the short-term



Long-term QoL may be impacted more by repair than 30-day morbidity



Future studies: Correlation between other subjective and objective ventral hernia repair measures

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