

Outcome of laparoscopic paraesophageal hernia repair in octogenarians: a registry-based, propensity score-matched comparison of 360 patients

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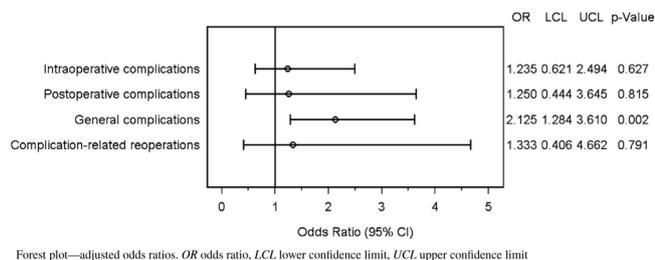
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Background

Paraesophageal hernias (PEH) tend to occur in elderly patients and the assumed higher morbidity of PEH repair may dissuade clinicians from seeking a surgical solution. On the other hand, the mortality rate for emergency repairs shows a sevenfold increase compared to elective repairs. This analysis evaluates the complication rates after elective PEH repair in patients 80 years and older in comparison with younger patients.

Methods

In total, 3209 patients with PEH were recorded in the Herniated Registry between September 1, 2009 and January 5, 2018. Using propensity score matching, 360 matched pairs were formed for comparative analysis of general, intraoperative, and postoperative complication rates in both groups.



Results

Out of the 3209 patients with PEH repair, 381 (11.9%) were aged ≥ 80 years. The vast majority of the repairs were done laparoscopically in both groups, at 93.8% (< 80 years) and 91.4% (≥ 80 years), respectively. Our analysis revealed a disadvantage in general complications (6.7% vs. 14.2%; $p = 0.002$) for patients ≥ 80 years old. No significant differences were found between the two groups for intraoperative (4.7% vs. 5.8%, $p = 0.627$) and postoperative complications (2.2% vs. 2.8%, $p = 0.815$) or for complication-related reoperations (1.7% vs. 2.2%, $p = 0.791$).

Conclusions

Despite a higher risk of general complications, PEH repair in octogenarians is not in itself associated with increased rates of intraoperative and postoperative complications or associated reoperations. Therefore, PEH repair can be safely offered to elderly patients with symptomatic PEH, if general medical risk factors are controlled.

	Disadvantage		p-value*	OR* for matched samples		
	< 80 Years	≥ 80 Years		OR	Lower limit	Upper limit
Fever	1.11	1.11	1.000	1.000	0.079	12.702
Urinary tract infection	0.83	2.22	1.000	2.667	0.351	44.213
Diarrhea	0.56	0.56	1.000	1.000	0.017	60.294
Gastritis	0.00	0.00				
Thrombosis	0.00	0.00				
Pulmonary embolism	0.83	0.28	1.000	0.333	0.000	12.420
Pleural effusion	2.50	4.44	1.000	1.778	0.497	7.451
Pneumonia	0.83	4.72	0.041	5.667	1.028	84.669
COPD	1.11	1.39	1.000	1.250	0.127	14.796
Heart failure	0.83	2.78	1.000	3.333	0.495	53.213
Coronary heart disease	0.56	1.11	1.000	2.000	0.118	95.634
Myocardial infarction	0.28	0.56	1.000	2.000	0.024	1918.000
Renal failure	0.83	1.11	1.000	1.333	0.094	26.159
Hypertensive crisis	0.56	0.83	1.000	1.500	0.059	77.990
Death	0.83	1.67	1.000	2.000	0.215	35.199
Other complications	1.11	3.89	0.494	3.500	0.686	33.477

Relative frequency of cases with disadvantage for the respective age group (non-diagonal elements of 2×2 contingency table)

OR odds ratio, COPD chronic obstructive pulmonary disease

*Adjusted according to Bonferroni: factor 16