Age and BMI do not predict POEM failure

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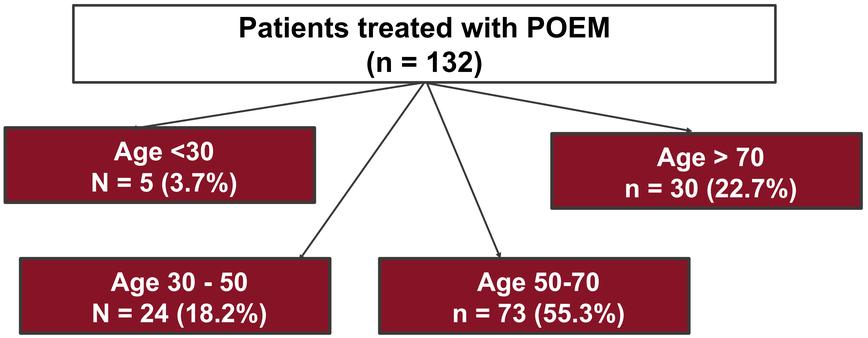
Introduction

It is well established that advanced age and BMI are associated with worse reflux, however, little is known about the effects of age and BMI on the success of POEM.

Hypothesis: Increased age and BMI predict POEM failure.

Methods

- **Retrospective chart review 2011-2022**
- **Single tertiary care institution**
- **Comparison: Chi squared or Fisher's exact, T-test**
- **Multivariable logistic regression analyzed the association between age and BMI with failure of POEM**



Results

Table 1. Comparison of Demographics and preoperative factors

	< 30	30 - 50	50 - 70	age > 70	p-value
Female	3 (60%)	12 (50%)	38 (53%)	17 (61%)	0.86
BMI > 35	1 (20%)	4 (17%)	15 (21%)	5 (19%)	<0.001
Pre-POEM Eckart	3.83	5.08	4.71	4.80	0.52
Prior intervention	2 (40%)	13 (54%)	31 (42%)	16 (53%)	0.64
Hiatal Hernia	0 (0%)	3 (13%)	11 (17%)	7 (30%)	0.35
Achalasia Type	1 (25%)	1 (7%)	14 (24%)	2 (10%)	0.45
	3 (75%)	10 (71%)	28 (47%)	12 (57%)	
	0 (0%)	3 (21%)	17 (29%)	7 (33%)	
Median IRP	27.05	26.56	28.32	29.00	0.94
Residual LES pressure	28.15	19.71	21.60	22.64	0.71
Basal LES pressure	51.74	35.98	46.60	54.63	0.088

Table 2. Comparison of post operative outcomes

	< 30	30 - 50	50 - 70	age > 70	p-value
	N=5	N=24	N=73	N=30	
Post POEM Eckart	0.2	1.45	0.86	0.5	0.083
Basal LES pressure	8	28.4	23.16	2.66	0.12
Residual LES pressure	4	7.75	14	7	0.56
Median IRP	4	17.6	19.33	9.66	0.2
Symptom recurrence	1 (20%)	4 (17%)	11 (15%)	3 (10%)	0.82
Repeat endoscopic intervention	2 (40%)	15 (62%)	35 (48%)	13 (43%)	0.51
Repeat POEM	0 (0%)	1 (4%)	2 (3%)	0 (0%)	0.79
Years until symptom recurrence	2	1.5	2.36	2	0.9

Results

Table 3. Multivariate Logistical Regression

	Odds ratio	P value	[95% conf.	interval]
Age				
30-50	1.74	0.41	0.11	25.41
50-70	2.02	0.55	0.16	25.04
>70	0.87	0.09	0.05	14.67
BMI > 35	0.84	0.61	0.50	1.43
Charlson Deyo	1.06	0.07	0.21	5.13
Pre-POEM Eckart	1.09	0.48	0.75	1.59
Post POEM Eckart	1.04	0.18	0.67	1.61
Prior intervention	1.95	1.17	0.63	6.00
Hiatal Hernia	2.35	1.09	0.54	11.08
Basal LES pressure	1.01	0.97	0.98	1.03
Median IRP	0.97	1.04	0.91	1.02

Conclusion

Our study suggests similar outcomes for patients with advanced age and BMI undergoing POEM compared with younger patients and patients with normal BMI. POEM is a safe and effective treatment for patients with advanced age. Achalasia recurrence is not associated with high BMI.