

OUTCOMES OF 2D ENDOSCOPIC ASSISTED GASLESS SUBCUTANEOUS MASTECTOMY AND CONVENTIONAL OPEN SURGERY FOR GYNAECOMASTIA: A PROSPECTIVE STUDY

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Background: Gynaecomastia is a benign disease in males and reported to have a rising prevalence. It affects male patients, especially those who are in their prime, productive age, be it physically, socially or emotionally. Traditional surgical management is open subcutaneous mastectomy, which leaves scars at the periareolar region, which may be disfiguring and causes significant negative impact on self-confidence and body image. The primary aim of this study is to assess the short-term outcomes of 2D endoscopic gasless endoscopic surgery in terms of operating time, hematoma/seroma requiring invasive intervention and pain. The secondary aim is to compare patient's satisfaction in cosmetic outcomes.

Materials and methods:

This a prospective with convenience sampling study. 38 patients with Simon grade 2 and 3 gynecomastia were recruited in the study. Patients were divided into 2 groups according to the operative techniques used: Group A (n=15) underwent open subcutaneous mastectomy and Group B (n=23) patients underwent endoscopic gasless subcutaneous mastectomy. Operative findings and complications were recorded for all patients. All patients returned to the breast clinic at 1 month and 3 months' post-op to assess their satisfaction and quality of life after the surgery using Modified Breast-Q questionnaire. The study was approved by the UMMC's Medical Ethics Committee MECID.NO: 2018731-6549 and NMRR-18-2649-44408. Two group were compared using Chi-square test. All analyses were performed using SPSS version 24 (IBM Corp, Armonk, NY, USA). A *p*-value of <0.05 were considered statistically significant.

Results:

Table 1: Demographic Data for the patients undergoing Surgery and outcome

Variables	Gynaecomastia patients N=38		Chi-square, χ^2	P value
	Group A Open surgery (N=15)	Group B Endoscopic surgery (N=23)		
Age (years) (Mean \pm SD)	34.80 \pm 9.38	38.87 \pm 6.59	380.000	.349
Race				
Malay	4 (26.7%)	10 (43.5%)	152.000	.394
Chinese	5 (33.3%)	4 (17.4%)		
Indian	6 (40.0%)	7 (30.4%)		
Punjabi	-	1 (4.3%)		
Bangladeshi	-	1 (4.3%)		
Breast Weight				
Right breast (Mean \pm SD)	239.60 \pm 137.64	200.61 \pm 128.57	1368.000	.241
Left breast (Mean \pm SD)	199.67 \pm 143.79	213.00 \pm 140.02	1368.000	.241
Total breast weight (Mean \pm SD)	439.27 \pm 268.905	413.61 \pm 256.331	23.109	.111
Intra-operative blood loss			228.000	.377
Minimum (<50mls)	12 (80.0%)	21 (91.3%)		
50mls	1 (6.7%)	-		
100mls -199mls	-	1 (4.3%)		
>200mls	1 (13.4%)	1 (4.3%)		
Post operation haematoma requiring operation			.001	.979
Yes	2 (13.3%)	3 (13.0%)		
No	13 (86.7%)	20 (87.0%)		
Post operation pain score (Mean \pm SD)	1.33 (\pm 1.291)	1.61 (\pm 1.469)	1.390	.499
0	6 (40.0%)	8 (34.8%)		
1-3 (mild)	9 (60.0%)	13 (56.5%)		
4-5 (moderate)	0	2 (8.7%)		
1-month post op				
Seroma (needed surgical intervention)	8 (53.3%)	4 (17.4%)	7.877	.049
Sensory disturbance (Loss of nipple sensation, numbness)	2 (13.3%) (numbness, nipple sensation lost)	1 (4.3%) (numbness)		
Asymmetry	0	0		
SSI	0	0		
3-month posop complication				
Seroma (needed surgical intervention)	2 (13.3%)	0	4.102	.392
Sensory disturbance (Loss of nipple sensation, numbness)	0	0		
Asymmetry (Right sunken nipple, Chest Asymmetry)	1 (6.7%) (Right sunken nipple)	1 (4.3%) (Chest Asymmetry)		
Surgical site infection	0	0		

Figure 1: Duration of endoscopic surgery (minutes) and total breast weight (gm) of each surgery

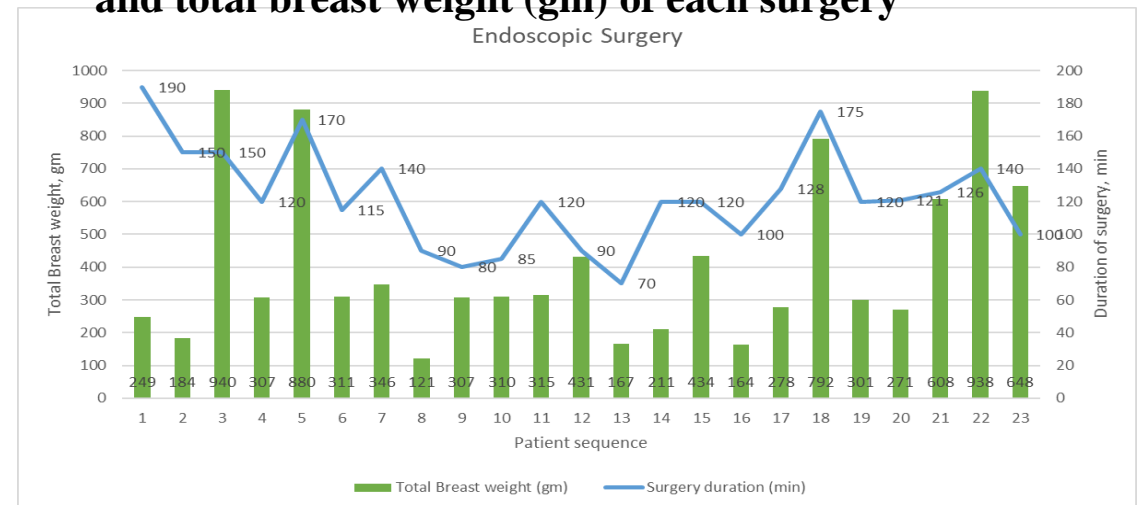


Figure 2: Duration of open surgery (minutes) and total breast weight (gm) of each surgery

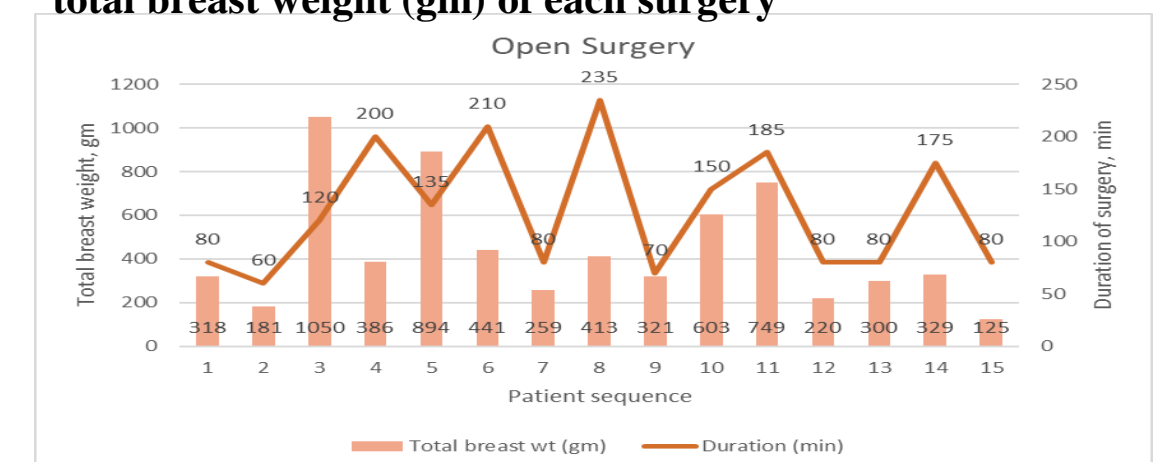


Table 3: Satisfaction and Breast Q evaluation

Variables	Gynaecomastia patients N=38		Chi-square, χ^2	p value
	Group A Open surgery (N=15)	Group B Endoscopic surgery (N=23)		
Breast Q score (Mean \pm SD)	71.80 \pm 10.25	82.48 \pm 6.21	266.000	.369
Patient's satisfaction scores with surgery and recovery			152.000	.394
Excellent	-	3 (13.0%)		
Very satisfied	3 (20.0%)	7 (30.4%)		
Somewhat dissatisfied	1 (6.7%)	-		
Satisfactory	9 (60.0%)	13 (56.5%)		
Poor	2 (13.3%)	-		

Discussion

Our study with relatively small sample size due to Covid Pandemic has found endoscopic surgery had a shorter duration compared to open surgery, contrary to previous reports (1). Mean surgery duration was slightly longer for open surgery (129.33 \pm 59.10 min vs. 122.61 \pm 30.84 min, *p*=0.297). Endoscopy surgeries were faster (<150 min in 87% vs. 67%) (2). Endoscopy showed minimal blood loss (91% vs. 80%, *p*=0.377) and similar hematoma rates (13%, *p*=0.979). Open Surgery had higher 1-month post-op complications (66.6% vs. 21.7%, *p*=0.049). Endoscopy patients reported higher Breast-Q, satisfaction score and improved quality of life.(3)

Conclusion: Gasless endoscopic mastectomy is relatively effective, safe, and offers superior aesthetic outcomes with similar risks to traditional open surgery, promoting higher patient confidence.

However, further evaluation with larger sample size and longer duration to confirm it's effectiveness should be carried out.

References:

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