

“Flying Squirrel” Liposuction In Treating Post-mastectomy Arm Lymphedema: 2-year Experience

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Background

- Recent breakthroughs in reconstructive microsurgery and supermicrosurgery have made lymphedema a condition that can now be surgically treated addressing both phases fluid and solid predominant states regardless of etiology
- Liposuction is a time-tested treatment for solid-predominant lymphedema
- However, its technical execution, physiological effects, and impacts on the pathophysiology remain debated
- We report our 2-year experience of treating solid-predominant post-lymphedema with tumescent liposuction and simultaneous brachioplasty

Methods

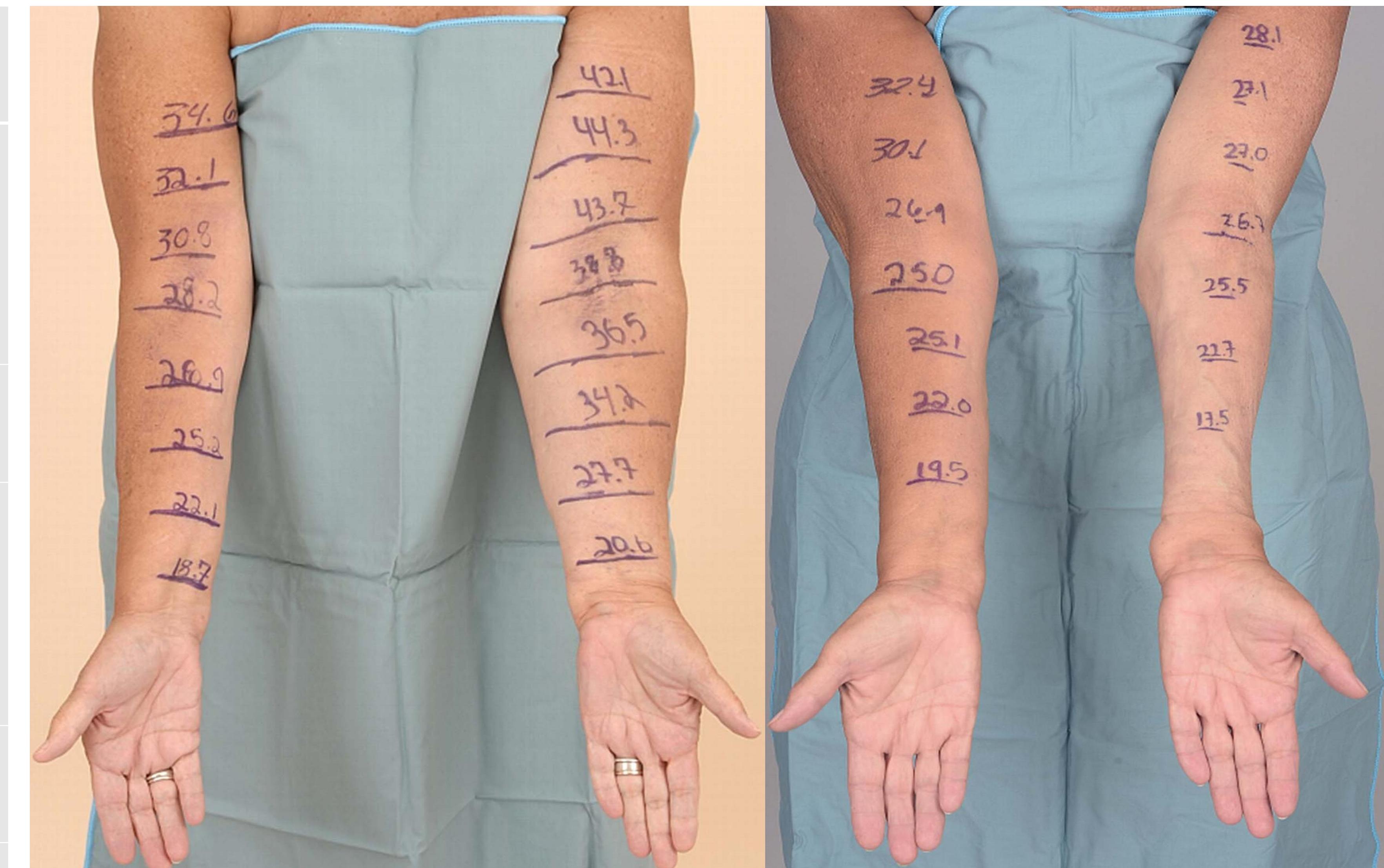
- All post-mastectomy patients with solid-predominant lymphedema who failed conservative management between February 2020 to April 2022 were included
- Liposuction was performed with tumescent technique and under tourniquet. Following liposuction, those with positive “Flying Squirrel” sign or having more than 4-cm skin excess under maximal traction, underwent simultaneous brachioplasty
- Standardized outcome tracking protocol including relief/worsening of symptoms, volumetric reduction, physical examination, and indocyanine green (ICG) lymphography were administered preoperatively and at predetermined intervals postoperatively (3mo, 6mo, 1y, 2y)



Positive “Flying Squirrel” sign following liposuction

Results

Age	62 ± 8.24	Symptom Duration (years)	6.21 ± 5.62
Sex (%)	Female (100)	Operative Time (min)	147 ± 22.24
BMI	28.41 ± 3.95	Skin Area Excised (cm ²)	175 ± 26.62
Radiotherapy (%)		Lipoaspirate volume (mL)	2100 ± 667.7
Yes	32 (94.1)	Volume reduction (%)	28.9 ± 11.1
No	2 (5.9)	Follow-up period (months)	10.1 ± 6.88
Affected Extremity (%) (n=34)	R 12 (35.3)	Improvement in lymph drainage on ICG (%)	34 (100)
	L 22 (64.7)	Reduction in compression class/wear time (%)	12 (35)



Patient with left upper extremity lymphedema (left) and at 12 months postoperatively (right)

Conclusions

"Flying squirrel" liposuction is safe and effective in treating post-mastectomy solid-predominant arm lymphedema and is associated with high patient satisfaction

References

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- Chen WF, Zeng WF, Hawkes PJ, Man J, Bowen M. Lymphedema Liposuction with Immediate Limb Contouring. *Plast Reconstr Surg Glob Open.* 2019;7(11):e2513