



To Drain or Not to Drain: Drains in Breast Reduction Surgery Increases Complication Risk in Patient Subgroups

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1. BACKGROUND

- Closed suction drains are placed to reduce the risk of seroma or hematoma following breast reduction surgery¹
- Complications associated with drains are discomfort, limited mobility, and risk of infection²
- However, drain use remains common after breast reduction and atopic of ongoing debate³

2. OBJECTIVE

To determine whether postoperative drains in breast reduction reduce the risk of seroma or hematoma compared to a drainless approach

3. METHODS

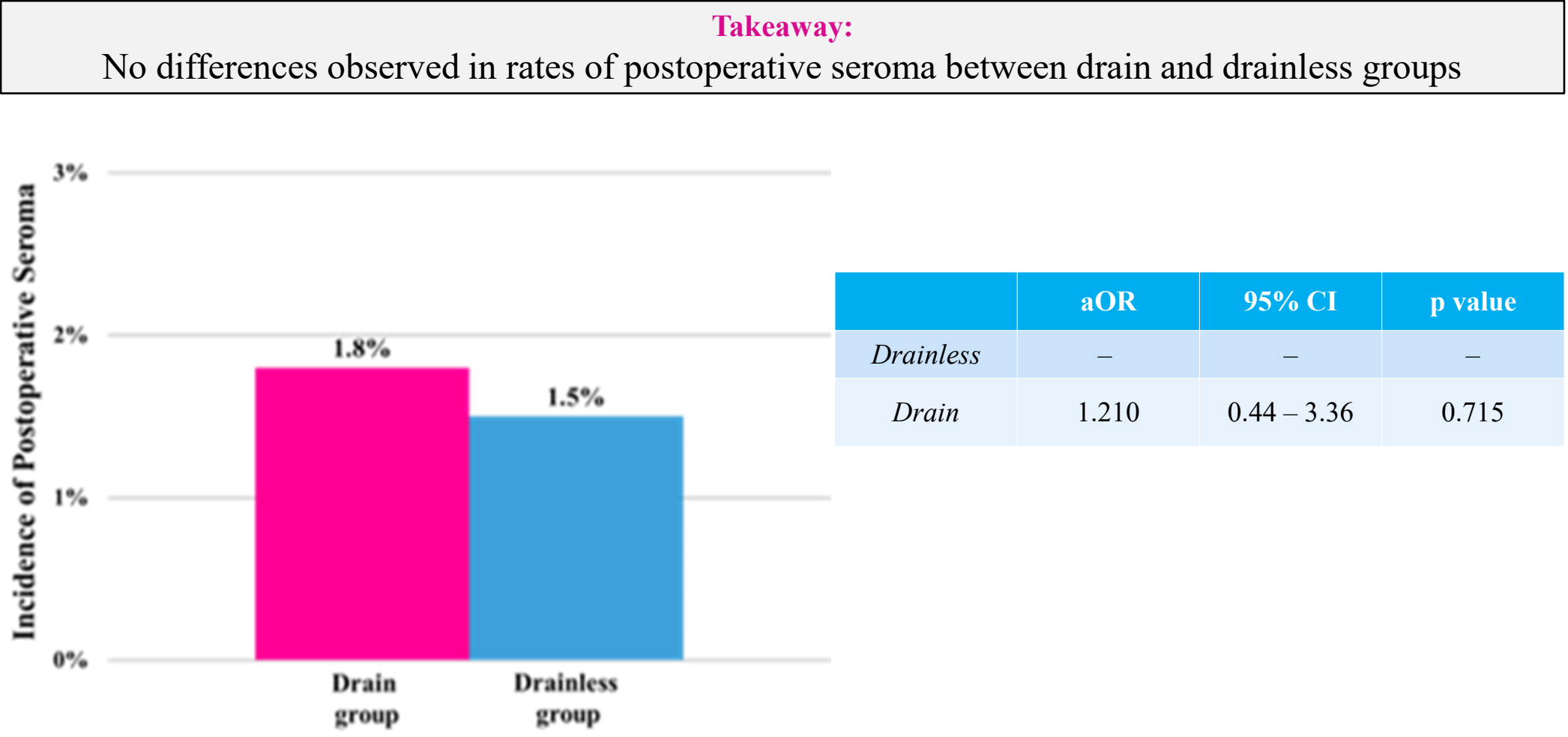
- **Design:** Retrospective review of breast reduction surgery (2019-2023)
- **Exclusion:** Incomplete data on drains
- **Cohort:** Drain group vs. Drainless group
- **Outcomes:** Any complication, seroma, hematoma
- **Data analysis:** Univariate (Pearson chi square, Mann Whitney U) and Multivariable Logistic Regression
- **Subgroup analysis**
 - Age (<30, 30-50, >50)
 - BMI (<30, ≥30)
 - Weight of tissue resected

4. RESULTS

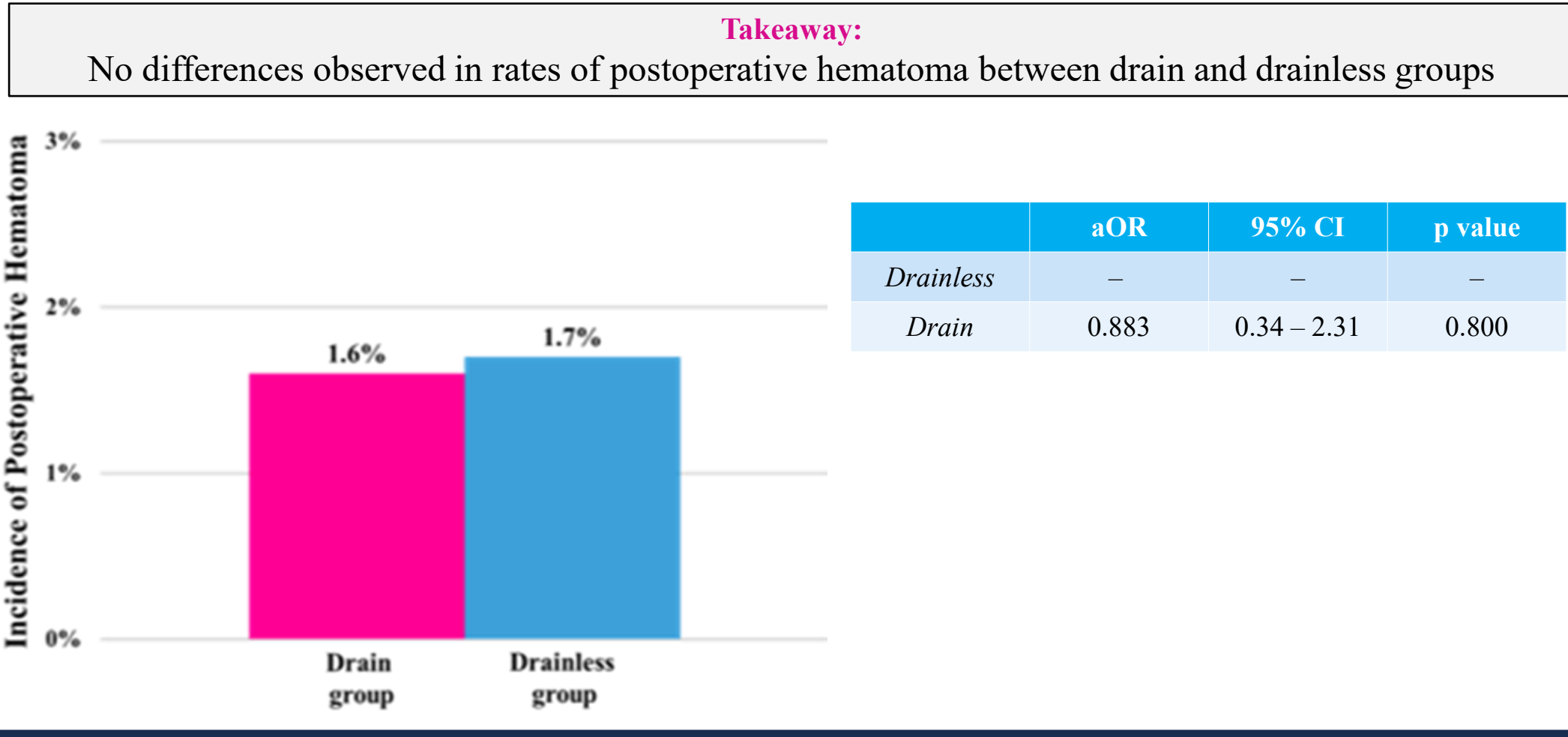
Patient Demographics & Characteristics

Mean ± SD or % (N)	Drain	Drainless	p value
Total Number of Patients	668	518	
Age (years)	39.5 ± 14.4	40.3 ± 15.8	0.558
BMI (kg/m ²)	30.4 ± 5.4	28.7 ± 4.9	< 0.001*
History of Breast Cancer	11.4% (76)	18.0% (93)	0.001*
Type of Reduction			
Unilateral	7.6% (51)	18.3% (95)	< 0.001*
Bilateral	92.4% (617)	81.7% (423)	
Liposuction Use	16.5% (110)	24.3% (126)	< 0.001*
Operative Time (min)	164.1 ± 59.0	157.5 ± 48.3	0.180
Weight of Tissue Resected (g)	1,276.9 ± 793.5	972.6 ± 694.4	< 0.001*

Seroma



Hematoma



Subgroup Analysis Age

Takeaway:
Increased risk of complications in patients > 50 years with drain use

	aOR	95% CI	p value
Age < 30			
Drainless	—	—	—
Drain	0.933	0.49 – 1.78	0.820
Age 30 - 50			
Drainless	—	—	—
Drain	0.907	0.45 – 1.81	0.778
Age > 50			
Drainless	—	—	—
Drain	2.559	1.10 – 5.94	0.029*

Subgroup Analysis BMI

Takeaway:
No differences in complication risk between groups across BMI categories

	aOR	95% CI	p value
BMI < 30			
Drainless	—	—	—
Drain	0.963	0.54 – 1.72	0.900
BMI ≥ 30			
Drainless	—	—	—
Drain	1.474	0.83 – 2.63	0.191

Subgroup Analysis Weight of tissue resected

Takeaway:
Increased risk of any complication with drain use in low weight resections (< 500 g)

	aOR	95% CI	p value
< 500 g			
Drainless	—	—	—
Drain	5.042	1.24 – 20.47	0.023*
500 - 1000 g			
Drainless	—	—	—
Drain	0.936	0.46 – 1.90	0.868
> 1000 g			
Drainless	—	—	—
Drain	1.082	0.48 – 2.44	0.857

5. CONCLUSION

- A drainless approach was not associated with an increased risk of seroma or hematoma
- Drain use may increase complication risk in low weight resections
- Drain use may increase complication risk in patients over 50 years of age

6. CLINICAL RELEVANCE

Routine drain placement
should be reconsidered
in breast reduction surgery

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