

Clinical Audit Reveals Significant Decline in Hematoma Incidence Following Double Compression in Breast Reduction Surgery: A Longitudinal Study

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Abstract

Improving healthcare requires continuous data collection and evidence-based practices. Clinical research often provides new evidence, but it does not always translate into clinical practice. Clinical audit, a systematic review of care quality, is a crucial tool for driving change. This study presents a clinical audit conducted at the UK Gynaecomastia Clinic to assess the frequency of complications, with a focus on haematoma, in male adult patients who underwent breast reduction surgery for gynecomastia. The audit data collected from 2017 to 2022 revealed a consistent decline in hematoma cases following the introduction of double compression in post-surgical care. The incidence of hematoma decreased from 6.66% in 2017 to 0.625% in 2022, resulting in a tenfold reduction. Statistical analysis with 95% confidence intervals supported the efficacy of double compression in reducing hematoma risk. These findings highlight the importance of clinical audits and the role of post-surgical care improvements in enhancing patient outcomes and reducing complications in gynecomastia surgery.

Introduction

- Gynecomastia is a condition that affects a smaller proportion of the male population. It occurs due to hormonal imbalances. It is more likely to occur in overweight individuals.
- The most common complication of surgical correction of gynecomastia is hematoma.
- The aim of the present audit is to identify the frequency of various complications that occur in patients who have undergone breast reduction surgery for gynecomastia.

Methodology

- Location** : UK Gynecomastia clinic
- Year of Data** : 2017 – 2022
- Inclusion Criteria** : patients who had undergone surgical correction of gynecomastia, males.

The number of patients operated on in 2017 was 150, the year when the main recommendation was to use a compression vest only for 2-8 weeks (individual-based). Additionally, patients were told to avoid strenuous physical activity. However, from 2018 onwards, post-surgical care recommendations were altered, and patients were told to wear additional 20 cm elastic compression for 24 hours for the first three days post-surgery. It means that in 2018, double compression was introduced to the patients. These recommendations were applied for all patients who have undergone breast reduction surgery from 2018 onwards, and data for post-surgery complications was collected via clinical audit each year from 2018 to 2022

Results

- Thus, in 2017, there were 150 surgical procedures done for the condition, whereas, in 2022, these numbers rose to 640.
- in 2017, large hematomas requiring theatre revisit were 3.33%, and cases that required office aspiration were another 3.33% (6.66% of hematomas).



Figure 1. Double compression following breast reduction surgery

Complications	2022	2021	2020	2019	2018	2017
Sample size	640	541	574	469	304	150
Total Hematoma cases (large and small) in %	0.625%	1.33%	0.69%	1.06%	1.97%	6.66%
Upper bound (CI+)	1.08%	1.63%	0.91%	1.35%	2.47%	11.66%
Lower bound (CI-)	0.27%	0.97%	0.46%	0.77%	1.47%	1.66%

Table 1 Hematoma cases every year as per clinical audit report (2017 to 2022)

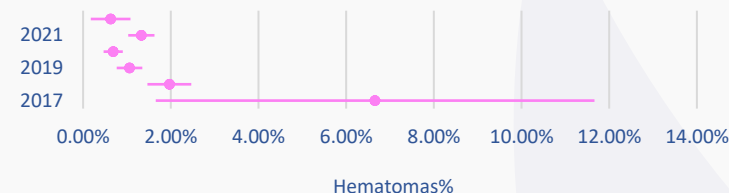


Figure 2 Percentage of hematomas with 95% CI for years 2017 to 2022

- Based on the above statistical analysis, it would be right to conclude with 95% confidence that a double compression bandage is quite effective at reducing hematomas in patients who have undergone breast reduction surgery.
- Thus, from the forest plot, it is evident that double compression has resulted in a significant decline in hematoma cases.

Conclusion & Recommendation

- Despite certain apprehensions, clinical audit over the years shows that it is quite likely that the number of hematoma cases has mainly declined due to the introduction of double compression.