

<https://doi.org/10.29289/25945394V36S10979>

979 – Occult breast carcinoma in elective breast surgery: prevalence and characteristics in 4,476 patients

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Introduction: Elective breast surgeries such as reduction mammoplasty and mastopexy are frequently performed world-wide. Although these procedures are not intended for cancer diagnosis, histopathological examination of resected tissue may reveal occult breast malignancies. Estimating the prevalence of incidental breast carcinoma in this population contributes to epidemiological knowledge and supports strategies for early detection of subclinical disease.

Methods: A retrospective epidemiological study including 4,476 female patients who underwent reduction mammoplasty or mastopexy between 2018 and 2024 at a private surgical center. Clinical characteristics, preoperative imaging results, and histopathological findings were reviewed. All surgical specimens were routinely submitted to systematic histopathological evaluation. Prevalence rates were calculated, and descriptive statistical analysis was performed to characterize demographic variables associated with diagnosis.

Results: Fifteen cases of incidental breast carcinoma were identified, corresponding to a prevalence of 0.33% (3.35 cases per 1,000 procedures). The mean age of affected patients was 49.5 years, with a higher frequency observed in women aged 40 years or older. Most tumors were classified as carcinoma in situ and measured ≤ 1 cm. No patient had clinical or radiological suspicion of malignancy preoperatively. All patients diagnosed with malignancy were referred for oncological management following histopathological confirmation.

Conclusion: Incidental breast carcinoma detected in elective breast surgery presents low prevalence but significant epidemiological relevance due to the potential for early diagnosis of clinically occult disease. The findings reinforce the importance of systematic histopathological evaluation of surgical specimens and highlight elective breast procedures as an opportunity for opportunistic detection of breast cancer, contributing to improved population health outcomes.

Ethics: Research Ethics Committee Approval (CAAE 89595925.9.0000.0412).

Keywords: breast neoplasms; mammoplasty; mastopexy; incidental findings.