Approach to Management Using Evidence Based Medicine: Proliferative Breast Lesions Among Reduction Mammoplasty Specimens

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INTRODUCTION: Given the reported lifetime estimate of 1 in 8 women becoming diagnosed with breast carcinoma, it is standard perioperative practice for excised tissue obtained from routine reduction mammoplasty procedures to be sent for pathology review. [1] On average, an estimated 0.2-1.1% of all reduction mammoplasty specimens reviewed by pathology is diagnosed with occult malignancy.[2-5] On occasion, atypical proliferative lesion of variable malignancy potential is also reported, which may become an area of concern given the management of such lesions may be unfamiliar to plastic surgeons. We aimed to provide a review of commonly diagnosed proliferative lesions identified in routine reduction mammoplasty specimens and the best supporting evidence for their subsequent management.

METHODS: Retrospective literature review using a PubMed search of all English-language articles published between 1990 and 2016 containing the phrases ("reduction mammoplasty", "breast reduction", "proliferative", "atypical", "hyperplasia", "ductal", "epithelial", "lobular", "stromal" and "meshchymal") was completed. A total of 210 publications were generated after initial screening with 10 articles ultimately incorporated after comprehensive review.

RESULTS: Commonly encountered proliferative lesions among reduction mammoplasty specimens include pseudoangiomatous stromal hyperplasia (PASH), atypical lobular hyperplasia (ALH), atypical ductal hyperplasia (ADH) and flat epithelial atypia (FEA). PASH and FEA with no concomitant atypical ductal or lobular lesions confers no risk of subsequent malignancy and routine standard of care is recommended. ADH and ALH confer a four-fivefold increased risk of subsequent breast carcinoma with increased risk among high risk individuals.[2] For this patient cohort, current management strategies recommend referral to a breast program, biannual clinical exam, yearly mammography with breast MRI, genetic testing for BRCA 1/2 gene mutation with or without chemoprevention in higher risk individuals.

CONCLUSION: Our review provides important findings by highlighting the most frequently encountered atypical proliferative lesions among routine reduction mammoplasty specimens as well as current evidence supporting management strategies.

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