Clinical results of the SerMa pilot study: elderly and patients with large breast volume have an increased risk of seroma formation after mastectomy [Abstract]

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Clinical results of the SerMa pilot study: Elderly and Patients with Large Breast Volume Have an Increased Risk of Seroma Formation after Mastectomy

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Background: The pathophysiology behind seroma formation as common postoperative complication after ablative procedures for breast cancer is poorly understood. In the clinical evaluation of the SerMa (Seroma formations of the Mammary gland) pilot study, which investigates primarily possible immunological or inflammatory causes of seroma formation, clinicopathological correlations between seroma formation and tumor biology or lymph node involvement were analyzed and are presented here.
Methods: The collective of the SerMa pilot study included 100 cases of primary breast cancer or carcinoma in situ who had undergone a mastectomy procedure with or without implant-based reconstruction at Augsburg University Hospital between 12/2019 and 12/2022.
Result: Seroma occurred significantly more often in older patients (median age in cases with seroma 73 years vs. 52 years without seroma; $p < 0.001$). In addition, patients with larger mastectomy specimen were significantly more likely to develop seroma (median weight in cases with seroma 580 g vs. 330 g without seroma; $p < 0.001$). Other significant parameters for seroma formation were BMI ($p = 0.005$), grading ($p = 0.015$) and tumor size ($p = 0.036$). Interestingly, with insertion of implant or expander, seroma occurred significantly less frequently ($p < 0.001$). In contrast, tumor biological characteristics, number of lymph nodes removed or affected showed no significant effect on seroma formation.
Discussion: In the present study, there was no significant influence of axillary tumor burden or tumor biologic characteristics on seroma formation. Since older patients in particular were at risk for seroma formation, the present study shows the need for patient education in older patients and patients with large breast volumes within the preoperative surgical clarification.
Conclusion: These clinicopathological data support the previously published results hypothesizing that seroma formation is related to immunological processes and will be tested on a larger collective in the planned international multicenter SerMa study (EUBREAST 5).

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