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Systemic Tranexamic Acid in Breast Reduction Mammoplasty

Purpose Statement: Tranexamic acid (TXA) is administered to reduce perioperative blood loss and prevent hematoma formation. Its use has been studied in several contexts including trauma surgery, obstetrics, orthopedic surgery, orthognathic and maxillofacial surgery, and plastic surgery. However, there is limited research examining TXA in breast surgery with conflicting findings in the existing literature. While the literature on topical TXA for breast surgery remains mixed, there is limited evidence on systemically administered TXA. Previous literature supports the use of systemic TXA to reduce hematoma and seroma formation following mastectomy. The purpose of this study is to analyze the effects of systemic TXA on BBR complications.

Methods: A single practice retrospective review of patients who underwent BBR by a single surgeon from 1/1/2015 to 1/1/2024 was performed. Demographics and complication rates including hematoma, seroma, wound dehiscence, skin necrosis, fat necrosis, nipple loss, rehospitalization, and reoperation were collected. Univariate analysis using chi-square was performed with a significance level of p<0.05.

Results: 47 BBR patients were identified, of which 28 (60%) received 1 g IV TXA intraoperatively, and 19 (40%) did not. There were no significant demographic differences between the groups, except the non-TXA group had a longer mean length of follow-up (854.9 vs 341.6, p=0.004). Overall, 15% of patients experienced complications. There were no statistically significant differences between the groups for incidence of fat necrosis (11% vs. 11%, p=0.41), delayed wound healing (4% vs. 11%, p=0.98), hematoma (4% vs. 0%, p=0.90) and seroma (4% vs. 0%, p=0.41). No other complications were found.

Conclusions: The use of systemic TXA in BBR does not reduce intraoperative or postoperative complication rates overall. However, this study is limited by sample size and larger studies may be necessary to further investigate the use of TXA in BBR.