

AB001. SOH21AS026. Perioperative utility of tranexamic acid in oncological breast surgery: a systematic review and meta-analysis

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Background: Tranexamic acid (TXA) is a synthetic anti-fibrinolytic agent used in various surgical procedures to achieve haemostasis and reduce blood loss. Recently TXA has seen an increase in perioperative utility as a result of its ease of administration, high therapeutic index and low cost. Its safety and effectiveness in oncological breast surgery (OBS) remain understudied.

Methods: PubMed, EMBASE, SCOPUS and other relevant sources were searched for studies investigating the effect of TXA in OBS, published up to October 2020. Primary outcomes of interest were local wound effects. Estimates of effect, when quantitative data was available, were pooled with a random effects model to estimate summary hazard ratios and 95% confidence intervals. Qualitative data was reported using descriptive statistics. Evidence quality was assessed using the Cochrane Collaboration tool.

Results: Seven studies involving 1,844 patients were included. Quantitative data was available for: mean total drainage volume, duration of drain in-situ and rates of seroma and haematoma formation. A significant reduction in rate of haematoma formation (OR 0.40, 95% CI: 0.18–0.89, $P=0.02$, $I^2=28\%$) was observed in the TXA group. There were no significant differences in the other outcomes. There was no significant increase in rates of adverse events.

Conclusions: Trends were observed in the present meta-analysis, although TXA did not appear to significantly alter the OBS outcomes. Current studies are insufficiently powered to isolate the effects of TXA on surgical morbidity. Further large prospective studies are needed to assess complications and determine the ideal dosage regime. At this juncture, prophylactic TXA in OBS cannot be recommended.
Keywords: Tranexamic acid (TXA); breast surgery; breast cancer; anti-fibrinolytic; haematoma; mastectomy; oncological breast surgery (OBS)

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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