AB089. SOH23ABS_147. A systematic review and meta-analysis of the prophylactic use of tranexamic acid to reduce blood loss during caesarean delivery

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Background: Maternal mortality remains a major healthcare challenge worldwide with 27% of all maternal deaths attributed to haemorrhage. Tranexamic acid (TXA) is widely available and has been shown to reduce the need for transfusion in elective surgery and bleeding related mortality in women who suffer a postpartum haemorrhage (PPH).

Methods: A meta-analysis was performed to identify randomised control trials looking at the prophylactic use of TXA in women undergoing caesarean section (CS). PPH >1 L was chosen as our primary outcome. Secondary outcomes included PPH >0.5 L, estimated mean blood loss, blood transfusion within 48 hours, drop in haemoglobin within 48 hours, additional uterotonics and additional surgical interventions to manage bleeding. The incidence of adverse drug reactions associated with TXA was also recorded.

Results: A total of 51 studies including 12,259 women met the inclusion criteria. Our meta-analysis indicated that TXA prophylaxis significantly reduced the likelihood of PPH >1 L in CS [relevant risk (RR), 0.38; 95% confidence interval (CI): 0.26–0.54]. This effect was more marked in higher risk deliveries (RR, 0.32; 95% CI: 0.18–0.56). TXA use significantly reduced mean cumulate blood loss [mean difference (MD), 195.51 mL; 95% CI: 168.21–222.81], blood transfusion requirement (RR, 0.38; 95% CI: 0.29–0.50), and drop in haemoglobin (MD, 0.9 g/dL; 95% CI: 0.79–1.01). In addition, the meta-analysis showed there was a reduction in the requirement for additional uterotonic's and surgical measures to control bleeding. TXA was found to increase nausea and vomiting (RR, 1.2; 95% CI: 1.12–1.29).

Conclusions: Prophylactic TXA administration reduces the incidence of PPH >1 L during CS. Similarly, it also reduced cumulative blood loss, drop in haemoglobin, and requirements for blood transfusion, additional uterotonics and surgical measures to control bleeding. However, our results do not endorse a strategy of prophylactic TXA use for all CS.

Keywords: Tranexamic acid (TXA); postpartum haemorrhage (PPH); caesarean section (CS); maternal morbidity; thromboembolism

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Footnote

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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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