A systematic review of tranexamic acid to reduce tonsillectomy-related haemorrhage in children

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OBJECTIVES
To assess the current evidence for the use of tranexamic acid (TXA) in reducing tonsillectomy-related haemorrhage in children.

METHODS
Ovid MEDLINE (1946 to date) and Ovid EMBASE (1974 to date) were searched using the MeSH descriptors "tonsillectom*" OR "adenotonsillectom*" AND "tranexamic acid". Reference lists of identified articles were scanned for additional studies. Identified articles were reviewed by 2 independent assessors for relevance and assessed systematically for bias.

RESULTS
7 relevant studies were identified which included children. Of these, only 2 studies were randomised controlled trials (RCTs) (n=124). Due to heterogeneity in haemorrhage definition, outcome measures and failure to fully separate adult from paediatric data, pooling of the results and meta-analysis was not appropriate. Overall, tranexamic acid does not appear to reduce post-tonsillectomy haemorrhage in children although the evidence is severely limited. Adult data is more convincing with a likely improvement in post-tonsillectomy haemorrhage.

KEY POINTS
• TXA delivered peri-operatively has the potential to reduce tonsillectomy related haemorrhage (primary and secondary post tonsillectomy bleeds)
• The theory of reduction of secondary bleeds is reduced intra-operative bleeding and therefore less use of diathermy electrocautery
• Evidence for use in children is limited, but adult data is encouraging. We propose to deliver a multicentre RCT to fully evaluate the effect of TXA on post-tonsillectomy haemorrhage.