

The efficacy of tranexamic acid in the prevention of postpartum hemorrhage among women delivered by caesarean section: observational case control study.

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ABSTRACT

Background:

Postpartum hemorrhage is the key determinant of significant maternal death and morbidity among women giving birth worldwide.

Objective:

To determine the effectiveness of Tranexamic acid premedication in the prevention of Postpartum Hemorrhage (PPH) among women during caesarian section at Kairuki Hospital in Dar es Salaam.

Methods:

This was an observational hospital-based case control study employing quantitative approach to examine the efficacy of Tranexamic acid in prevention of Postpartum Hemorrhage (PPH) administered during Caesarean section at Kairuki Hospital in Dar es Salaam. A total of 317 pregnant women delivered by Caesarean section were divided into case and control group. The case group received 1g of tranexamic acid (TXA) with the induction of spinal anesthesia plus 10 I.U of oxytocin after delivery of the baby, and the control group received only 10 I.U. Oxytocin after delivery of the baby as standard of care. Both groups were compared regarding amount of blood loss. Data analysis was conducted using SPSS version 25. Descriptive statistics were summarized using median(IQR), binary logistic and multivariate analysis was conducted considering P value of < 0.05 as a measure of significance.

Results:

Median (IQR) age of study participants was 28.8 (19-37) years. The study group experienced significantly less blood loss than the control group, with 287 (110 - 409) mls and 416 (307 - 688) mls respectively ($P < 0.001$). Additionally, the study group showed higher levels of hemoglobin (12.65 [10.3 – 13.5]) g/dL and hematocrit (34.9 [32 - 36]) 24 hours after the surgery compared to the standard of care group (10.6 [9.4 – 13.8] g/dL and 31.6 [28-34]) respectively ($P < 0.001$). Median (IQR) of birth weights of babies delivered by study participants was 2.99 (2.0 – 3.8) kg.

Conclusion:

Based on the results obtained, it appears that Tranexamic acid is probably more effective in reducing Postpartum Hemorrhage (PPH), as well as lowering the likelihood of developing postpartum hemorrhage.