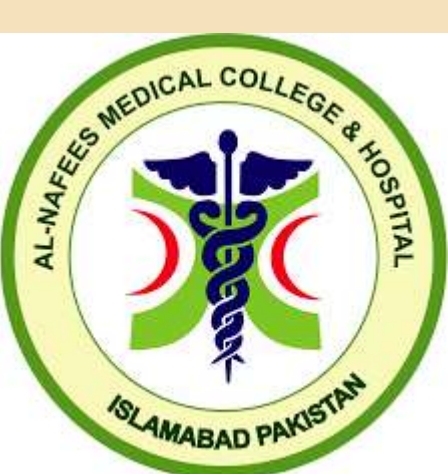




Tranexamic acid in reducing hemorrhage after vaginal delivery: Randomized controlled trial at a tertiary care hospital in Pakistan

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Objective and Background

To determine the efficacy of prophylactic tranexamic acid in reducing hemorrhage after vaginal delivery as compared to placebo.

Postpartum hemorrhage (PPH) is a potential life-threatening complication of both vaginal delivery and lower segment caesarean section worldwide. PPH is common and can occur in patients without risk factors for hemorrhage. The treatment and management of PPH are focused on resuscitation of the patient while identifying and treating the specific cause. Tranexamic acid (TXA) is a medication used to treat or prevent excessive blood loss from major trauma, postpartum bleeding, surgery, tooth removal, nosebleeds, and heavy menstruation.

Introduction

Postpartum hemorrhage (PPH) accounts for nearly 25% of maternal deaths and approximately 12% survivors after PPH suffer from severe postpartum anemia. This is especially important for third world countries like Pakistan, where women enter pregnancy with nutritional anemia and decreased iron stores. To lower the occurrence rate of major morbidity and mortality due to bleeding after delivery, it is very vital to reduce blood loss during lower segment caesarean section and vaginal delivery. Prevention of PPH relies primarily on uterotonics, as part of active management of third stage of labour, but early use of tranexamic acid (TXA) after lower segment caesarean section has become part of several international recommendations. The statistical data collected shall provide evidence base for recommendation of routine use of TXA in vaginal delivery.

Methodology

The randomized controlled trial was conducted in the obstetrics and gynecology department at Al-Nafees Medical College and Hospital from 01-07-2020 to 31-12-2020. A total of 258 participants in the age group of 18-40 years, nulliparous to para 4, at gestational age of 37-41 weeks were recruited through non-probability consecutive sampling after informed consent. All those participants who underwent caesarean section, were using anticoagulants, had liver disease were excluded. The participants were randomized into two groups, 129 in each by randomization through lottery method.

Prophylactic 1 gm tranexamic acid, or placebo (10ml distilled water) intravenously immediately administered after delivery but definitely within 30 minutes. Every participant received the medication according to their allotted groups intervention or placebo, ensuring blinding of patients and the treating physician. All patients were followed for 72 hours and efficacy (yes/no) was noted by determining hemoglobin and hematocrit values 72 hours post-delivery.

Results

The mean age of the patients was 28.59 ± 4.63 years in intervention group while the mean age of the patients was 28.21 ± 5.42 years for placebo group. Postpartum hemorrhage was 7.8% in intervention group as compared to 21.7% in placebo group (p-value=0.002). The mean blood loss was 705.00 ± 186.26 ml in intervention group in comparison to 791.07 ± 137.47 ml in placebo group (p-value=0.131).



Discussion and Conclusion

This study concluded that prophylactic Tranexamic acid is significantly more efficacious in reducing hemorrhage after vaginal delivery as compared to placebo. Yang H et al reported that the postpartum hemorrhage was decreased by usage of TXA in vaginal delivery. Another study reported lower mean blood pressure and madam ki guidelines.

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