Tranexamic Acid Usage in Third Stage Labour in Reducing Post-Partum Haemorrhage in High Risk Mothers following a Vaginal Delivery: A Randomised Prospective, Double-Blinded Clinical Trial

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ABSTRACT

Introduction: Postpartum Haemorrhage (PPH) remained the leading cause of maternal morbidity and mortality especially among high risk mothers labouring in low resource settings. Due to lack of strong evidence on the use of tranexamic acid (TXA) as prophylaxis against PPH, we decided to investigate the use in our population which is highly relevant due to the sociodemographic preposition of our mothers. **Objective:** To investigate the efficacy of low dose intravenous (IV) TXA given at third stage labour during vaginal delivery with the clinical objective of preventing postpartum haemorrhage (PPH) among women at high risk of PPH. **Method:** This double-blind clinical trial was conducted in Department of Obstetrics and Gynaecology of Sabah Women and Children's Hospital, Kota Kinabalu over 12 months period (January 2017 to December 2017) whereby women with ≥2 risks of PPH were randomly assigned for IV treatment (either TXA or placebo) in addition to prophylactic oxytocin at third stage of vaginal delivery. The primary outcome was to investigate the efficacy of low dose IV TXA given at third stage of labour in preventing PPH (blood loss ≥500ml, measured by Standard Visual Estimation of blood loss. Secondary outcomes related to postpartum blood loss and immediate adverse effects of TXA were analysed as well. **Results:** 140 women with ≥2 risks for PPH who underwent vaginal delivery were recruited. Blood loss was significantly lower in the TXA group compared to the placebo group (187±107.7ml and 323.4±130.4ml respectively, p<0.0001). Mean drop in haemoglobin was significantly lower in the TXA group (0.63±0.397g/dL) compared to the placebo group (1.42±0.635g/dL). **Conclusion:** The use of low dose parenteral TXA significantly reduced postpartum blood loss as well as the drop-in haemoglobin level in high risk population compared to placebo, without severe adverse outcome.

There will be more Ectopic Pregnancies in Outer Space

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ABSTRACT

Objective: This is a theoretical discussion on the proposition that there will be more ectopic pregnancies in outer space. **Methodology:** It is envisioned that here on earth with iso-gravity the ruptured follicle at mid-cycle under earth lunar calendar time which gives rise to an ovum which will gravitate and be "imbibed" by the fimbriae and hence begin its journey via the fallopian tubes by ciliary action cushioned by fallopian tubal cells whereby it meets the upwards forward swimming spermatozoa which is nourished by secretions found within the tubes. To what extent the ovum requires or subsists on gravity to eventually implant if fertilized in the endometrium is unknown. It is proposed that in outer space with zero gravity the gravity effect is lost and perhaps ciliary action alone may be insufficient to propel it to the correct place for implantation. In areas where gravity is higher than earth the "weight" of the ovum or blastocyst upon fertilization may accelerate "travel". Travel paths of propulsive spermatozoa may be affected by zero gravity and Newton's Laws hence fertilization may "overshoot" near the fimbriae or undershoot in extra gravity areas or the spermatozoa could float away? **Results:** It is postulated that there will be more ectopic pregnancies in outer space where gravity is not in effect. This is a theoretical aspect which requires study and consideration as humans prepare to travel more in outer space. **Conclusion:** It is theoretically surmised that there will be more ectopic pregnancies in outer space if human beings were to travel and reproduce in the weightlessness of outer space with all the other issues involved. The next question to ask is: how to manage this in outer space?