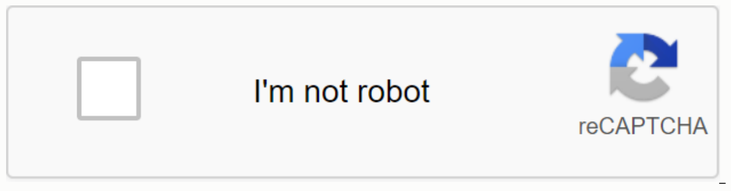

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Tranexamic acid in cesarean section pdf

Redirecting to a new website, don't worry about the security of your data ... Per partum bleeding is one of the most common, life-threatening complications during childbirth. Recently, many studies have found tranexamic acid to be effective in preventing severe bleeding by caesarean section. Until now, the optimal dose is not yet known. Objective Our study aims to compare the effect of two intravenous doses of tranexamic acid with blood loss during and after cesarean section. Patients and methods led a prospective, randomized, double-blind, controlled study. The 52 conscious and consent-prescribed birth-related children scheduled for cesarean section were randomised to two groups of either 10 mg/ kg or 15 mg/ kg tranexamic acid intravenously. The primary result of our study was the amount of blood loss 6 hours after the sample. This total amount of blood loss was estimated according to Gross's formula. The secondary results were postoplative levels of haemoglobin and the total dose of oxytocin. The data were recorded, tabled and analysed using the SPSS ® version 17). Numeric variables were presented as mean and standard deviation (SD). The students' T-exam was used to compare between groups for quantitative variables. A difference of P<0.05 P was considered statistically significant. Results We found no significant differences in both groups in terms of average age, body mass index, gravid, parity, average average average haemoglobin levels and haematocrit, fluid dosing and duration of surgery. Mean blood loss was significantly lower and the mean postoomerative haemoglobin was higher in a group that received 15 mg Traneksamic acid. In addition, the consumption of oxytocin was generally lower in this group. Conclusion The 15 mg/ kg dose of tranecsamic acid was found to be more effective for blood loss during and after cesarean section than the 10 mg/ kg dose, with higher postoperation haemoglobin and less recourse to oxytocin. Keywords cesarean section, postpartum bleeding, trankusamic acid, blood loss. Introduction The prices of caesarean sections are rising all over the world. Per partum bleeding is one of the most common, life-threatening complications of this procedure [1]. Reducing bleeding during and after caesarean section directly improves the results of caesarean section, especially maternal mortality and mortility. Tranexamic acid is a fibrinolytic inhibitor that has been used for several years to reduce bleeding in various surgical procedures [2,3]. Recently, many studies have found tranexamic acid to be effective in preventing severe bleeding by caesarean section. The optimal dose to date is not yet known [4]. The aim of our research is to compare the effect on blood loss during and after cesarean section. Methods We led a prospective, randomized, double-blind, controlled study of Tunis' maternity and from June to December 2013. Following approval by the Institute's Ethics Committee, 52 information and consentanates scheduled for cesarean section (CS) were randomised to two groups to receive either 10 mg/kg (TXA 1 group) or 15 mg/kg (TXA 2 group) tranexamic acid (Exacyl®, SANOFI-AVENTIS, France) intravenously. Only women classified as Class 1 according to the American Society of Anesthesiologists (ASA 1) were included with regular perinatal therapy and scheduled for elective CS through pfannenstiel incision in spinal anesthesia. We did not include childbirth with a known allergy to TAX, which is nutritious and has heart, liver, kidney or brain disease, clotting disorders such as thrombophilia. Women with anaemia, abnormal place (ultrasound detected), preeclampsia, macrosomal, polyhydramnise or twin pregnancy were not included. Randomisation was performed just before CS according to a random table to give two groups of 26 births. All solutions were prepared and given by an anaesthetist who was not involved in the treatment or evaluation of patients. TXA was administered five minutes before cs. anesthesia protocol was the same in all patients and consisted of spinal anaesthesia containing 10 mg hyperbaric Bupivacain 0.5% (Bupicaine 0.5% ®, UNIMED, TUNISIA) and 5 Ugufentanil (Sufentanil®, MEDIS, TUNISIA). All patients received 20 ml/ kg of 0.9% saline. The interface of oxytocin (Syntocino®, ROTEXMEDICA, Germany) was administered intravenously immediately after delivery, and 15 UI were infused for 6 hours after surgery. A complementary dose of oxytocin was administered preossively at the request of a surgeon who was not aware of the study. The recorded data included age, BMI, gravide, parity, gestation, preoperation haemoglobin and haematocrit count, fluid dosing, total dose of oxytocin and duration of surgery. We performed another complete number of blood cells (CBC) 6 hours after surgery to calculate the difference in haemoglobin in each birth and the volume of blood lost during CS and up to 6 hours after that. This total amount of blood loss was estimated in gross formula [5]: Total blood loss=(Estimated blood volume)/[(Hct start - Hct-final)/Hct mean](Hctstart: peroprative haematocrit; Hctfinal: postoperative haematocrit). Primary result: the primary result of our study was the total blood loss 6 hours after secondary results: secondary results were postoperative levels of haemoglobin and a total dose of oxytocin administered. Statistical analysis: the sample size was calculated using 90% efficacy and α 0.05 to minimise the difference in blood loss by 100 ml. We found that we need at least 22 patients in each group, but we include all randomized patients (26 in each group). The data was posted, and analysed using the SPSS ® version 17). Normal Normal Normal was inspected prior to analysis. Numeric variables were presented as mean and standard deviation (SD). The students' T-exam was used to compare between groups for quantitative variables. A difference of P<0.05 P was considered statistically significant. Results The main indication for cesarean section was uterine scar in both groups and 52% in the TXA1 group and 48% in the TXA2 group (p=0.36). The total dose of TXA in the TXA1 group was 702 ± 164 mg and in the TXA2 group 977 ± 161 mg (p<<10-3). We found no significant difference in both groups in terms of average age, BMI, gravid, parity, average average average haemoglobin values and haematocrit, fluid dosing and duration of surgery (Table 1). The mean blood drop was significantly lower in the TXA2 group (p=0.017). The mean postoperative haemoglobin was higher in the TXA2 group (p=0.022). The mean haematocrit was similar in both groups (p=0.081). The total dose of oxytocin was generally lower in the TXA2 group (p=0.05) (Table 2). No perioperative complications, no allergic reactions and no early postoperative thromboembolysis were observed in both groups. Table 1. Preoperative Properties TAX1 (n=30) TAX2 (n=30) P Age (year) 32.2 ± 4 32 ± 5 0.97 Gestation period (week) 37.8 ± 1.4 38.1 ± ± 1.6 0.53 BMI (kg/m²) 26.7 ± 4 25.8 ± 3 0.34 Gravid (middle) 2.3 ± 1 1.8 ± 1 0.3 14 Pair 0.9 ± 0.9 1.6 ± 0.7 0.25 In-surgery fluid (ml) 1347 ± 201 1271 ± 207 0.18 Duration of surgery (m 40 ± 5 37 ± 9 0.21 Preoperative haemoglobin (g/p/st) 11.5 ± 0.9 11.7 ± 1 0.31 Preoperative haematocrit (%) 34.6 ± 2.5 35.2 ± 2.6 0.37 Table 2. Results 202 253.3 ± ± 150 0.017 Postoper haemoglobin (g/dl) 10.5 ± 0.9 11.1 ± 0.9 0.022 Postoperative haematocrit (%) 31.2 ± 6 33. 6 ± 2 0. Total dose of oxytocin (IU) 30.7 ± 9 25.3 ± 1 0.05 Discussion We found that by administering 15 mg/ kg tranxy acid intravenously, 5 minutes before CS is more effective than administering 10 mg/ kg to reduce blood clotting and oxytocin consumption due to cs. Tranexamic acid is known to reduce bleeding in many procedures [4]. Its fibrinolytic effect is due to the prevention of plasminogen activation with a plasminogen activator and the blocking of places binding plasminogen lysin to fibrin [6-10]. This leads to clinically smaller blood loss. However, the effect of TXA on blood loss in childbirth procedures is not yet sufficient for the study [4,11-13]. Sekhavat, et al. [12] only assesses postoperal bleeding 2 hours after surgery; they found TXA reduces 24% postoerative blood loss in the active group. In our study, the reduction in blood loss was approximately 33% in the 15 mg/ kg group. In a placebo study [13], a standard dose of TXA of 1 gr was tested and a 37% reduction in childbirth was observed in the intervention group bleeding. In fact, most studies used a standard dose of TXA regardless of the patient's weight. Whatever. The exact effective dose of TXA remains controversial, which is the reason for our study. In addition, we are still unable to know whether adverse reactions associated with the use of TXA, such as acute renal failure, are associated with the dose. Movafegh used weighted doses of TXA, et al. [14], they found that intravenous administration of 10 mg/ kg TXA 20 minutes prior to cs use reduces intra- and postoperative blood loss and intraoerative oxytocin use compared to placebo. There has long been controversy about assessing blood loss during and after CS or vaginal delivery. Accurate collection is not really easy, since blood is mixed with amnes during CS. After CS, blood loss is assessed by checking vaginal towels and sheets. In fact, a visual estimate of bleeding during and after CS or vaginal delivery is not accurate; it tends to overestimate with lower bloodfall or underestimate greater blood loss. Calibrated blood collection curtains are a simple and accurate way to measure blood loss when available. Pritchard, et al. [15] used a chromium-labelled red blood cell technique to measure blood loss during cs; It was about 930 ml. Such techniques may be too complex to use in current clinical practice. Stafford et al. [16] calculated blood loss using a formula with haematocritic changes prior to and after cesarean section, maternal weight and height. They compared calculated blood loss with the estimated visually. They found the visual estimate significantly underestimates blood loss, especially when it exceeds 1,000 ml and 1,500 ml. In our study, the total amount of blood loss during and after CS was evaluated using gross's formula [5] to assess blood loss: Total blood loss= (Estimated blood volume)/ [(Hct-start-Hct-final) / Hct mean]. This formula is an estimate of the original formula described in 1974 [17]. The original theoretical equation, verified in several clinical trials [5,17,18], was accompanied by a differential equation solution that led to a formula requiring the calculation of natural logarithisms: Blood loss=(Estimated blood volume) ×[ln(Hctstart/Hctfinal)]. Administration of TXA to pregnant women may cause concern about thromboemboly. Previous studies have shown the safety of this drug in both pregnant and non-pregnant patients [7.18-20]. Acute renal failure is a life-threatening complication that may be related to the use of TXA. We didn't test the renal function after the operation. In fact, acute renal failure associated with the use of TXA in postpartum bleeding may cause concern about

the potential side effects of this drug, knowing that optimal doses are still not being determined. Further studies are needed to assess the safety of trankemic acid after childbirth, as well as that in the preventive indication. Conclusion The 15 mg/ kg dose of Tranexamic acid was found to be more effective during and after blood loss a dose of more than 10 mg/kg with haemoglobin levels higher than 30 mg/kg and less use of oxytocin. References AbouZahr C (2003) The global burden of maternal death and disability. Br Med Bull 67: 1-11. No, no, no, no. Katsaros D, Petricevic M, Snow NJ, Woodhall DD, Van Bergen R (1996) Tranecsamic acid reduces postbypass blood use: a double-blind, prospective, randomized study of 210 patients. Ann Thorac Surg 61: 1131-1135. No, no, no, no. Dunn CJ, Goa KL (1999) Tranexamic acid: a look at its use in surgery and other indications. Drugs 57: 1005-1032. No, no, no, no. Gai MY, Wu LF, Su QF, et al. (2004) Clinical observation of reduced blood loss with tranexamic acid during and after cesarean section: multicentury, randomised study. Eur J Obstet Gynecol Reprod Biol 112: 154-157. No, no, no, no. Gross JB (1983) Assessment of permissible blood loss: corrected for dilution. Anesthesiology 58:277-280. No, no, no, no. Neilipovitz DT (2004) Tranexamic acid for major spinal surgery. Eur Spine J 13 Suppl 1: S62-65. No, no, no, no. Rajesparan K, Biant LC, Ahmad M, Field RE (2009) Effect of intravenous bolus of tranexamic acid on blood loss in total hip prosthesis. J Luunivel Surg Br 91: 776-783. No, no, no, no. Johansson T, Pettersson LG, Lisander B (2005) Tranexamic acid total hip artroplasty saves blood and money: randomized, double-blind study in 100 patients. Acta Orthop 76:314-319. No, no, no, no. Benoni G (1999) Traneksamic acid reduces blood loss of knee articulated plastic - if administered at the right time. Lakartidningen 96:2967-2969. No, no, no, no. Nilsson IM (1980) Clinical pharmacology of aminocap protein and tranexamic acids. J Clin Pathol Suppl (R Coll Pathol) 14:41-47. No, no, no, no. Gohel M, Patel P, Gupta A, et al. (2007) The efficacy of tranecsamic acid in reducing blood loss during and after cesarean section: Randomized case-containerized prospective study. J Childbirth Gynecol India 57:227-230. Sekhavat L, Tabatabaii A, Dalili M, Farajkhoda T, Tafti AD (2009) The efficacy of tranxamic acid in reducing blood loss after cesarean section. J Matern Foetus Newborn Med 22:72-75. No, no, no, no. Gungorduk K, Yıldırım G, Asıcıoğlu O, Gungorduk OC, Sudolmus S, et al. (2011) The efficacy of intravenous tranxation acid in reducing blood loss after an elastic cesarean section: prospective, randomized, double-blind placebo contactary study. Am J Perinatol 28:233-240. No, no, no, no. Movafegh A, Eslamian L, Dorabadi A (2011) Effect of intravenous tranexamic acid administration on blood loss during and after cesarean section. Int J Gynaecol Childbirth 115:224-226. No, no, no, no. Pritchard JA, Baldwin RM, Dickey JC, et al. (1962) Changes in blood volume in pregnancy and puerperium. Red blood cell loss and changes in blood volume during and after vaginal delivery, cesarean section Cesarean section and complete hysterectomy. Am J Childbirth Gynecol 84: 1271-1282. Stafford I, Dildy GA, Clark SL, Belfort MA (2008) Visually assessed and calculated blood loss in vaginal and caesarean deliveries. I'm J Obstetrician Obstetrician 199: 519. No, no, no, no. Bourke DL, Smith TC (1974) Evaluates permissible haemodilization. Anesthesiology 41: 609-612. No, no, no, no. Ward CF, Meathe EA, Benumof JL, et al. (1980) Computer normogram to compensate for blood loss. Anesthesiology 53:126. Yang H, Zheng S, Shi C (2001) Clinical study on the efficacy of tranexamic acid in reducing postpartum blood loss: randomised, comparative, multicenter study. Zhonghua Fu Chan Ke Za Zhi 36:590-592. No, no, no, no. Yang ZG, Chen WP, Wu LD (2012) Effectiveness and safety of tranexamic acid when reducing knee artroplasty: meta-analysis. J Luunivel Surg Am 94: 1153-1159. No, no, no, no. No, no, no, no.