THE EFFECT OF TRANEXAMIC ACID ON REDUCING THE AMOUNT OF BLOOD LOSS DURING CESAREAN SECTION AT MATERNITY HOSPITAL IN DUHOK

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ABSTRACT

Background: The Cesarean section rate is increasing worldwide. Efforts are being made to decrease Cesarean section which may lead to many complications. World Health Organization recent guidelines recommended the administration of Tranexamic acid to decrease the amount of blood loss and treat postpartum hemorrhage to reduce the risk of severe anemia and the need for blood transfusion.

Objectives: To assess the effect of Tranexamic acid on the amount of blood loss during elective cesarean section and to evaluate the reduction in the hemoglobin and hematocrit level.

Methods: This randomized control trial study was conducted during the period from 15th September 2021 to 15th January 2022, at Duhok Hospital for Obstetrics and Gynecology. The study enrolled 200 women in the age group 20 to 40 years, who were at 37 to 41+6 weeks of gestation, received regular antenatal care, had no renal, liver, heart diseases or coagulopathies and no allergy to drugs. The women were randomly allocated into two groups the interventional group G1 received 1 gm of Tranexamic acid in 100 ml normal saline for 10 minutes before starting the operation and the control group G2 did not receive it. Both groups received 10 units oxytocin IV after fetal delivery. Amount of blood loss intraoperatively, change in hemoglobin, hematocrit levels, drug side effects were observed and analyzed, and the need for extra uterotonics, blood transfusion and the occurrence of PPH among the two groups.

Results: There were no significant differences in term of age, BMI, parity, gestational age, antenatal care visits, and the indications for cesarean section between G1 and G2. There was a highly significant difference in the mean estimated blood loss (EBL) between the two Groups, which was (290±5.5 ml) for G1 and (429±81 ml) for G2, the P-value <0.001. The same for the mean Hb and hematocrit reduction with a highly significant between the two Groups, *P*-value <0.001. The need for extra uterotonics drugs was less in G1 compared to G2.

Conclusion: Administration of IV Tranexamic acid as a prophylaxis before starting skin incision significantly reduced the amount of blood loss intra operatively, and affected hemoglobin, hematocrit level. It deceased the need for extra uterotonics drugs.

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Keywords: *Cesarean section, postpartum hemorrhage, tranexamic acid.*

Cesarean section (CS) is the most common operation that is performed on women. It aims to decrease both maternal and fetal morbidity and mortality with cautions and careful approach[1]. It has become the mode of birth in over a quarter of all the deliveries. The incidence of CS is increasing worldwide[2]. In fact, its rate is continuously rising and in 2017 increased to 32%[3].

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Post-partum hemorrhage (PPH) associated with CS is estimated to be twice that of vaginal delivery with an estimated blood loss of 1000 ml[4]. This increase in rate would result in an increased risk of PPH which is a leading cause of maternal morbidity and mortality and is responsible for one-quarter of all maternal death worldwide[5]. Most maternal mortality due to PPH occurs in developing countries, more than one third of the women are being affected. In the most recent Pregnancy Mortality Surveillance System report, 11.5% of pregnancy-related deaths in the United States were due to hemorrhage within 24 hours[6].

The prevention is important since several reports from various high-resource countries describe recent increases in the incidence of PPH[7]. Mechanical and pharmacologic methods are instituted as a part of the active management of the third stage of labor. The three common strategies used in the active management of the third stage of labor are the use of oxytocic drugs, uterine massage, and umbilical cord traction[8]. In addition to the use of antifibrinolytic agents, namely Tranexamic acid (TXA), a synthetic derivate of the amino acid lysine that reversibly inhibits the activation of plasminogen, thus inhibiting fibrinolysis and reducing bleeding. It may enhance the patient's own hemostatic mechanism and reduce the blood loss during CS hematocrit[9]. Although there were studies in Duhok city about PPH but the researcher couldn't find any studies that investigate the effect of TXA. This study was designed to assess the effect of Tranexamic acid on the amount of blood loss during elective CS.

PATIENTS AND METHODS

A randomized control trial study was conducted to study the effect of Tranexamic Acid on the amount of blood loss during elective CS at Duhok hospital for Obstetrics and Gynecology Hospital at city. Two hundred women who had elective CS were recruited. The data were collected by the researcher from 15th of September 2021 to 15th of January 2022.

Inclusion criteria included women in the age of 20–40 years; singleton pregnancy; live fetus at gestational age from 37 to 41+6(weeks), Received regular ANC. Exclusion criteria included: women who refused to participate in the study; patients with known allergy to TXA; those with bleeding disorders or had history of ante-partum hemorrhage; patients with hepatic, cardiac, renal, pulmonary diseases; pregnant women who were on anticoagulant treatment; anemic women with Hb <10g/dl; multiple pregnancy; intrauterine fetal death; and preterm pregnancy.

The Ethical Committee of Duhok Directorate of Health and the Scientific Committee of University of Duhok formally approved the study proposal. A written consent from each woman who agreed to participate was obtained.

The cases were randomized into two groups: study group G1 composed of 100 cases that received 1gm of TXA in 100 ml of normal saline intravenous drip at least 10 minutes before starting the skin incision, and the control group G2 composed of 100 cases. All the cases had lower segment CS. After delivery of the anterior shoulder of the fetus, all patients received 10 units oxytocin IV.

The amount of blood loss was estimated after delivery of the placenta to the end of the operation (which is considered as a primary postpartum period), through measuring the volume of blood in the suction bottle, reweighing towels (swabs) used during operation. Hemoglobin level and hematocrit value were checked 24

hours before surgery and 24 hours postoperatively. Patients were observed 2 hours, 24 hours postoperatively for any bleeding, drug side effects and were managed accordingly. All data were recorded on a case record form.

The statistical package SPSS version 26 was used to analyze study variables. Categorical data were analyzed by the Chi-square test (or Fisher's exact test when the Chi-square test was inappropriate due to low cell frequency). Numerical data were analyzed by the unpaired t-test for difference in means. The P-value ≤0.05 was considered statistically significant.

RESULTS

Socio-demographic and obstetrics characteristics of the study sample (n=200) According to the annual statistics of Duhok Hospital for Obstetrics and Gynecology/ Duhok Health Directorate 2021, the total deliveries were 17267, and the number of the elective cesarean section were 2087 (12.2%) from total 6185 (36%) CS operations. Regarding Table 1. The mean age of the enrolled women was (29.3 ±5.5SD) years, with a range of (20-40) years. It was found that (33%) were in the age group of (26 - 30) years. The differences between the two groups regarding the age were insignificant with P-value 0.684. The mean BMI for the women was (31.5±4.5SD) kg/m2, (42.5%) were located in the obesity class I, the minority (5%) were located in the obesity class III (≥40). The majority of the enrolled women (85%) were housewives, the employed women recorded (13%), while only (1.5%) of the study sample were currently students. The rural residency was in (60.5%) among them. As to their educational status (33.5%) were illiterate, (19.5%) can read and write and (29.5%) reached high school, (9%) college. The differences in BMI, occupation, residency, and education were insignificant between the two groups.

Table 1. The socio-demographic characteristics of the study sample.

Characteristic		G1	G2	Total		P value
		No.	No.	No.	%	
Age (years)	20 - 25	29	29	58	29.0	0.684
	26 - 30	36	30	66	33.0	
	31 - 35	19	19	38	19.0	
	36 - 40	16	22	38	19.0	
	Mean ±SD	29.0 ±5.3	29.6 ±5.7	29.3 ±5.5		
BMI (kg/m2)	18.5 - 24.9 (normal)	4	11	15	7.5	0.149
	25 – 29.9 (pre-obesity)	29	36	65	32.5	
	30 – 34.9 (obesity class I)	49	36	85	42.5	
	35 – 39.9 (obesity classII)	14	11	25	12.5	
	≥ 40 (obesity class III)	4	6	10	5.0	
	Mean ±SD	31.8 ±4.1	31.1±4.8	31.5 ±4.5		
Occupation	Housewife	86	85	171	85.5	0.782
	Employed	12	14	26	13.0	
	Student	2	1	3	1.5	
Residence	Urban	41	38	79	39.5	0.664
	Rural	59	62	121	60.5	
Education	Illiterate	34	33	67	33.5	0.943
	Read and write	28	30	59	29.5	
	Intermediate + high school	27	29	56	28.0	
	College	10	8	18	9.0	

Total	**100**	**100**	**200**	**100.0**	

Table 2. shows the obstetrical history of the study population. The mean parity for the study sample was (1.5±1.6SD), About half of the women (46.5%) were para (1-2) followed by nulliparous (32%), with no Significant differences between the study groups, P-value>0.05. The mean gestational age for the study sample was (38.6±1.1SD) wks, the majority (88%) of the enrolled women were at (37 to 39+6) weeks of gestation, while only (12%) were at late term (40-41+6) weeks of gestation. All the study sample had good ANC with 4 -8 visits.

Table 2 Obstetric history of the study sample n=200

Obstetrical Characteristics		G1	G2	Total		P value
		No.	No.	No.	%	
Parity	Nulliparous	30	34	64	32	
	1-2	49	44	93	46.5	
	3-4	15	15	30	15	0.897
	5-8	6	7	13	6.5	
	Mean ±SD	1.5 ±1.5	1.6 ±1.7	1.5 ±1.6		
Gestational Age (wks.)	37 – 39+6	92	84	176	88	0.082
	40 – 41+6	8	16	24	12	
	Mean ±SD	38.6±1.1	38.6 ±1.2	38.6 ±1.1		
ANC visits (4-8)	Mean ±SD	5.6 ±1.6	5.6 ±1.7	5.6 ±1.7		
Indication for C/S	No scar	60	62	122	61	0.868
	One scar	9	7	16	8	
	≥Two scars	31	31	62	31	
Total		**100**	**100**	**200**	**100**	

Blood loss, Reduction in Hb level, and Hct value:

Table 3. demonstrates the mean estimated blood loss (EBL) intraoperatively for G1 was (290±55) ml with a range of (175–483 ml), while the mean for G2 was (429± 81SD) ml, with a range of (210- 670 ml). There was a highly significant difference in blood loss between the two groups intra-operatively. G1 showed less blood loss than G2 with P-value <0.001. The mean preoperative Hb for G1 was (12.1±1.1) gm/dl, while the mean for G2 was (12.3±1.1) gm/dl. The mean postoperative Hb for G1 was (11.8±1.1) gm/dl, for G2 was (11.1±1.2 SD) gm/dl. The mean Hb reduction for G1 was (0.68±0.58SD) gm/dl and showed less reduction than G2 with mean reduction of (1.07±0.65SD) gm/dl. The differences in Hb reduction between G1 and G2 were highly significant with P value < 0.001. The mean preoperative Hct for G1 was (35.7%±3.1SD), for G2 it was (36.0%±3.2 SD). The mean postoperative Hct for G1 was (33.8%±3.1SD) while G2 was (33.0%±3.5SD). The mean Hct reduction for G1 was (2.10%±1.55 SD) and the range was (0.10 – 7.20), while G2 showed more reduction in Hct and the mean was (2.99%±2.24 SD) and the range was (0.10 – 11.10) %. The differences in the Hct reduction between G1 and G2 were highly significant p value 0.001.

Table 3 Comparison of total blood loss, Hb reduction and Hct reduction between G1 and G2.

	Intervention group G1 (n = 100)			Control group G2(n = 100)			P value
	Range	Mean	SD	Range	Mean	SD	
Total blood lost (ml)	175 - 483	290	55	210 - 670	429	81	< 0.001
Estimated blood loss (L)	0.03 - 1.34	0.25	0.21	0.04 - 1.14	0.39	0.24	< 0.001
Pre-operative Hb (gm/dl)	10.0 - 14.8	12.1	1.1	10.1 - 14.7	12.3	1.1	0.219
Post-operative Hb	8.3 - 13.7	11.8	1.1	8.9 - 14.0	11.1	1.2	0.001
Hb reduction	0.10 – 3.70	0.68	0.58	0.10- 3.10	1.07	0.65	< 0.001
% Preoper.- postoper. Hb Reduction	0.78 - 29.60	5.54	4.57	0.79 - 24.17	8.66	5.14	< 0.001
Preoperative Hct	28.6 - 43.8	35.7	3.1	28.3 - 43.3	36.0	3.2	0.538
Postoperative Hct	25.8 - 40.0	33.8	3.1	23.4 - 42.0	33.0	3.5	0.001
Hct reduction	0.10 -7.20	2.10	1.55	0.10 - 11.10	2.99	2.24	0.001
% Preop-postop Hct Reduction	0.26 - 20.11	5.83	4.22	0.29 - 28.12	8.27	6.04	0.001

The Parity and the Indications for CS correlation to Blood Loss:

Table 4. explains the correlation between parity and the amount of blood loss. This study showed no significant differences in the EBL in correlation to parity in all cases. P value 0.515. About the relation between the indications of CS and the EBL. For no scar category in both groups the mean EBL was 355.47±97.07, for one scar category it was (353.50±106.89), while the mean for two scars and above category was (369.08±97.84), statically there was no significant correlation between the indication of CS and the amount of blood loss P-value 0.652.

Table 4 One Way Analysis of Variance for Total Blood loss (ml) in all cases, by parity level and previous CS scars

	No. of cases	Mean	SD	95% Confidence Interval for Mean		P Value
				Lower limit	Upper limit	
Nulliparous	64	359.67	97.28	335.37	383.97	
1 - 2	93	351.82	94.43	332.37	371.26	P = 0.515
3 - 4	30	369.00	100.92	331.32	406.68	
5 - 8	13	392.15	119.40	320.00	464.30	
No scar	122	355.47	97.07	338.07	372.87	
One scar	16	353.50	106.89	296.54	410.46	P = 0.652
Two scars and more	62	369.08	97.95	344.21	393.95	

Total	**200**	**359.53**	**97.84**	**345.89**	**373.17**

Intraoperative and postoperative use of other uterotonics, blood transfusion, and PPH:

Table 5 shows only two cases needed prostaglandin intraoperatively in G2 (1%), while none of the G1 needed PG. Seven cases in study sample needed ergot ampoule (3.5%), one case in G1 and six cases in G2 with no significant difference between the study groups P-value >0.05. Two hours postoperatively, only one case in G1 developed PPH. No cases were recorded in G2. The same case in G1 needed ergot ample, prostaglandin tablets, after 6 hours the case developed bleeding for the second time and needed blood transfusion then reopened under general anesthesia B. lynch was done. The indication for CS in this case was infertility, during the operation endometriotic lesions with multiple small fibroids, were noted. No cases reported regarding bleeding after 24 hours of the operation in both groups.

Table 5 Intraoperative and Post-operative use of uterotonics, blood transfusion, PPH

Intraoperative and post-operative use of uterotonics / blood transfusion, PPH	**G1 (n = 100)**	**G2 (n =100)**	**Total (n = 200)**		**P value**
	No.	**No.**	**No.**	**%**	
Use of PG intraoperatively	0	2(1%)	2	1.0	0.497
Use of Ergot intraoperatively	1 (0.5%)	6 (3%)	7	3.5	0.118
Blood transfusion intraoperatively	0	0	0	0.0	NA
Use of PG 2 hrs. postoperatively	1 (0.5%)	0	1	0.5	1.000
Use of Ergot 2 hrs. postoperatively	1 (0.5%)	0	1	0.5	1.000
Blood transfusion 2 hrs postoperatively	1 (0.5%)	0	1	0.5	1.000
PPH 2 hrs postoperatively	1 (0.5%)	0	1	0.5	1.000
PPH 24 hrs postoperatively	0	0	0	0.0	NA
Blood transfusion 24 hrs. postoperatively	0	0	0	0.0	NA

Post-operative side effects

Regarding the side effects, Table 6. about 8.5% of the study sample manifested nausea; 2.5% in G1 and 6% in G2. Vomiting recorded 3.5% of the study sample and it was more among G2 (2.5%). While headache was 3% and it was mainly in G2 (2.5%) compared to only 1% in G1. No cases were recorded regarding drug hypersensitivity, diarrhea and thrombotic events among the study sample.

Table 6 postoperative side effects

Post-operative side effects	**Intervention (n = 100)**	**Control (n = 100)**	**Total (n = 200)**		**P value**
	No.	**No.**	**No.**	**%**	
Nausea	5(2.5%)	12(6%)	17	8.5	0.076
Vomiting	2(1%)	5(2.5%)	7	3.5	0.445
Headache	1(1%)	5(2.5%)	6	3.0	0.212
Hypersensitivity to the drug	0	0	0	0.0	NA
Diarrhea	0	0	0	0.0	NA
Thrombosis	0	0	0	0.0	NA

DISCUSSION

Tranexamic acid is found to reduce blood loss and improve survival rates in a wide range of surgical procedures including obstetrics and trauma patients with severe bleeding. Beside its action as a fibrinolysis inhibitor, it also has anti-inflammatory effect. Postpartum hemorrhage can be considered as a life-threatening obstetric emergency that occurs after CS or VD. Worldwide, there has been evidence that PPH can be considered as one of the main mortality causes among women, which begins once the baby is delivered and divided to primary PPH immediately after fetal delivery and extended to the first 24 hours, and secondary postpartum after 24 hours until 6 weeks postpartum.

The current study focused on observing the amount of blood loss during CS after placental delivery to the end of the operation and the need for extra uterotonics, blood transfusion, reduction in Hb and Hct, and PPH within first 24 hours. The study showed the use of TXA during CS significantly reduced the amount of blood loss from the time of placental delivery to the end of abdominal closure. As the mean EBL was significantly less in G1(290±55) ml versus (429±81) ml in G2. These results were in line with the two studies reported in Turkey by Güngördük et al.,[10] and Sentürk et al.[11]. Similar results were found with another study done in Egypt by Abdel-Aleem et al.[12] which showed total blood loss of (241.6 ml) for the intervention group versus (510.6 ml) for the control group.

This study tried to figure out the correlation between the parity, the indications for cesarean section and the amount of blood loss. Regarding the parity and blood loss, this study showed no significant correlation between the parity and the amount of blood loss. There was no significant difference in the amount of blood loss in relation to CS indications.

With regards to changes in hemoglobin level and hematocrit value 24 hours postoperative, in this study the mean post-operative hemoglobin level was significantly higher in G1 (11.8±1.1SD) gm/dl than in G2 (11.1± 1.2SD) gm/dl. Reduction in Hb level was significantly less in G1 (0.68 ± 0.58 SD) gm/dl than in G2 (1.07 ± 0.65 SD) gm/dl. In addition, post-operative hematocrit value was significantly higher in G1 (33.8% ± 3.1 SD) than in G2 (33.0 ± 3.5 SD). the mean hematocrit reduction was less in G1 (2.10% ± 1.55 SD) versus G2 (2.99% ± 2.24 SD). These results were similar to two studies done in Egypt by Abd El-Naser et al.[13] and Albaz[14].

Regarding the need for extra uterotonics, less uterotonics were required in G1 (1.5%) versus (4%) in G2. This result matched with a study done in Baghdad by Nayyef et al., (2020)[15]. PPH was found to be reduced in most studies but we did not find that TXA reduced PPH; in fact, only one case developed PPH within the first 24 hours and was in the intervention group. No any recorded cases in G2. These results were different from a study done in Baghdad by Nayyef et al. (2020)[15] which showed that two cases in control group developed PPH within 24 hours while no recorded cases in the intervention group developed PPH.

In term of drug side effects, there were no reported cases regarding hypersensitivity to the drug and thrombotic event. The most frequent reported adverse effect was nausea (8.5%), and it was more in the control group than in the intervention

group. The two other most recorded side effects were vomiting and headache and were more among control group. This result was similar to what Abd El-Naser et al. (2019)13 found in a study conducted in Egypt.

CONCLUSION

The use of TXA before starting CS as prophylaxis is safe, non- invasive and effective to reduce the excessive blood loss intraoperatively. Further study is needed to analyze the different doses and the timing of prophylactic administering of TXA to prevent PPH.

REFERENCES

1. Aaronson, D., Harlev, A., Sheiner, E., Levy, A., 2010. Trial of labor after cesarean section in twin pregnancies: Maternal and neonatal safety. 2010. J Maternal Fetal and Neonatal Medicine, 23(6); 550-4. Doi: 10.3109/ 147605093156700.
2. Sharma, R., Najam, S., Misra, K.M. 2011. Efficacy of tranexamic acid in decreasing blood loss during and after cesarean section. J Biomed Parmacol J, 4(1); 231-5.
3. Martin, J. A., Hamilton, B.E., Osterman, M.J.K., Driscoll, A.K. 2019. Births Final data for 2018. National Vital Statistics Reports; Center for Health Statistics (U.S), 68(13).
4. World Health Organization. 2009. WHO guidelines for the management of postpartum hemorrhage and retained placenta.
5. Goswami, U., Sarangi, S., Gupta, S., Babbar, S., 2013. Comparative evaluation of two doses of tranexamic acid used prophylactically in anemic parturients for lower segment cesarean section: A double-blind randomized case control prospective trial. Saudi Journal of Anesthesia, 7(4); 427-431. Doi: 10.4103/1658-354X.121077.
6. Pregnancy Mortality Surveillance System" U.S. 2017. Department of Health & Human Services- Centers for Disease Control and Prevention CDC, [Online]. Available: https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm. [Accessed 13 April 2022].
7. Lutomiski, J. E., Byne, B. M., Devane, D., Greene, R. A., 2011. Increasing trends in atonic postpartum hemorrhage in Ireland: an 11-year population-based cohort study. BJOG An International Journal of Obstetrics and Gynecology, 119(3); 306-14. Doi: 10.1111/j.1471-0528.2011.03198.x
8. BH, Chi., Taylor, G., 2015. Translating clinical management into an effective public health response for postpartum hemorrhage. BJOG An International Journal of Obstetrics and gynecology, 122(2); 211-211. Doi: 10.1111/1471-0528. 13221.
9. Novikova, N., Justus, H. G, Cluver, C., 2015. Tranexamic acid for preventing postpartum hemorrhage. Cochrane Library, Cochrane Database of Systemic Review, no. Issue 6. Art. No. CD007872.DOI: 10.1002/14651858.CD007872.pub3.
10. Gungorduk, K., Yıldırım, G., Asıcıoğlu, O., Gungorduk, O. C., Sudolmus, S., Cemal, Ark., 2014. Efficacy of intravenous tranexamic acid in reducing blood loss after elective cesarean section: A Prospective, Randomized, Double-

Blind, Placebo-Controlled Study. American Journal of Perinatology, 28(3); 233-240. Doi: 10.1055/s-0030-1268238.

11. Senturk, M. B., Cakmak, Y., Yildiz, G., Yildiz, P., 2013. Tranexamic acid for cesarean section: a double-blind, placebo-controlled, randomized clinical trial. Maternal Fetal Medicine. Archives of Gynecology and Obstetrics J, 287; 641-5. Doi: 10.1007/s00404-012-2624-8.
12. Abdel-Aleem, H., Alhusaini, T. K., Abdel-Aleem, M. A., Menoufy, M., Gulmezoglu, A. M., 2013. Effectiveness of tranexamic acid on blood loss in patients undergoing elective cesarean section: randomized clinical trial. The Journal of Maternal Fetal and Neonatal Medicine, 26(17); 1705-1709. Doi: 10.1309/1476058.2013.794210.
13. Abd El-Naser, Abd El-Gaber., Hazem, H. A., Mustafa, M. K., Ahmed M. A., 2019. Effect of tranexamic acid in prevention of postpartum hemorrhage in elective caesarean delivery: a randomized controlled study. International Journal of Reproduction, Contraception, Obstetrics and Gynecology, 8(1);1-5. Doi:10.18203/2320-1770.ijrcog20185401.
14. Albaz, Z., 2020. Role of prophylactic tranexamic acid in reducing blood loss during elective Cesarean Section. Journal of Family Medicine, 7(8); ID1227.
15. Nayyef, S. S., Maha, M. D., Ibraheem, F. A., 2020. The effect of routine intraoperative tranexamic acid in elective cesarean section. International Journal of Advanced Research in Medicine, 2(2);85-90. Doi: 10.22271/27069567.2020.v2.i2b.51.

پوخته

کاریگه ریا ده رمانێ ترانکزامیک ئه سید ل سه ر کیمکرنا بڕا خوینا وندابووی د ماوێ نه شته رگه ریا زاروکبوونێ ل نه خوشخانا ئافره ت و زاروك بوونی ل دهوکی

پێشەکی و ئارمانج: رێژه یا نه شته رگه ریێن زاروکبوونێ یێن قه یسه ری ل سه رانسه ری جیهانێ د زێده بوونێ دانه، هه ول دهێنه دان ژبۆ کێمکرنا ئه ڤان نه شته رگه ریێن قه یسه ری، یا کو دبیته ئه گه رێ گه له ک ده رهاڤێژا ل پاشه روژێ. و لڤێ دوماهیێ رێنیشانده رێ رێکخراوا ساخله میا جیهانی بکارئینانا ده رمانێ ترانکزامیک ئه سید پێشنیاردکه ت ژبۆ کێمکرنا خوینا وندابووی دماوێ نه شته رگه ریێ دا، و چاره سه رکرنا خوینبه ربوونێ پشتی زاروکبوونێ و کێمکرنا رێژه یا توشبوونێ ب نه خوشیا کێم خوینیا دژوار وپێدڤیا ڤه گوهاستنا خوینێ ئارمانجا ڤێ ڤه کولینێ ئه وه کو کاریگه ریا ده رمانێ ترانکزامیک ئه سید بخه ملینیت لسه ر وێ بڕا خوینا وندابووی دماوێ نه شته رگه ریا زاروکبوونا قه یسه ری دا و لدویڤدا ده ستنیشانکرنا ئه و کێمیا په یدابووی د هیموگلوبنینی و هیماتوکریتی (قه باریَ ته پکێن سور یێن لسه ر ئێک) پشتی نه شته رگه ریێ.

ئه ڤ ڤه کولینا هه ره مه کی یا ورد ل به رواری ۲۰۲۱/۹/۱۵ هه تا ۲۰۲۲/۱/۱۵ ل نه خوشخانا دهوک یا ئافره ت و زاروکبوونێ هاتیه ئه نجامدان، ل سه ر ۲۰۰ ژنان یێن کو ژیێ وان دناڤبه را ۲۰- ٤۰ سالێێدا، و دهه فتیین ۳۷-٤۱+٦ یێن دوو گیانێێدا و چاڤدیریه کا باش هه بوو دوی ماوه یدا، و هیج ده رهاڤێژه ک یان ئێشێن دومدرێژ وه ک ئێشێن خوینێ و دلی و گولچیسکان هتد...نه بون. نه خوش هاتنه هه لبژارتن و پولینکرن لسه ر دوو گروپان، گروپێ ئێکێ (1G) کو ئێک گرام ژ مادێ ترانکزامیک ئه سید بۆ هاتنه دان به ری نه شته رگه ریێ و گروپێ دووێ (2G) بۆ نه هاتنه دان. هه ردوو گروپان ۱۰ یه که ژ مادێ ئوکسیتوسین پشتی زاروکبوونێ وه رگرتن کو رێکاره کا روتینیا نه خوشخانێ یه ژبۆ نه هێلانا چێبوونا خوینبه ربوونێ پشتی زاروکبوونێ. و گوهرینێن مه زن دناڤبه را هه ردوو گروپاندا هاتنه توێژینکرن برێیا بکارئینانا پاکێجا ئاماره ی SPSS ٢٦.

ئەنجام: چ جیاوازیێن ئاماره ی یین دیار دناڤبه را هه ردوو گروپاندا ژلایێ ژی و کێشا له شی وهژمارا زاروکبوونێن به ری نوکه و ئه گه رێن نه شته رگه ریا قه یسه ری نینن، به لێ جیاوازیه کا دی یا ئاماره ی یا دیار هه یه د بڕا خوینێ یا وندابوویدا دناڤبه را هه ردوو گروپان کو د گروپێ ئێکێ ۲۹۰ ± ٥.٥ ملیلیته ر بوو و گروپێ دووێ ٤۲۹ ±۸۱ میلیلیته ر بوو p. value <۰.۰۰۱، و هه ر هه مان تشت ده رباره ی رێژا هیموگلوبینی و هیماتوکریتی و هه روه سا ده رمانێن کرژبوونا مالبچویکی.

دەرئەنجام: بکارئینانا ده رمانێ ترانکزامیک ئه سید وه ک رێکاره کێ خۆپاراستنێ به ری ئه نجامدانا نه شته رگه ریا قه یسه ری کاریگه ریه کا به رچاڤ هه یه د کیمکرنا بڕا خوینا وندابووی دماوێ نه شته رگه ریێ دا وئاستێ کیمکرنا هیموگلوبین و هیماتوکریتی و زێده باری کێمبوونا پێدڤیبوونا ده رمانێن زێده یێن کرژبوونا مالبچویکی.

الخلاصة

تأثير دواء الترانكزاميك اسيد على تقليل كمية الدم المفقود اثناء العملية القيصرية في مستشفى النسائية والتوليد في دهوك

الخلفية والأهداف: إن معدل العمليات القيصرية في ازياد على مستوى العالم, وتبذل العديد من الجهود للحد من العمليات القيصرية لما لها من مضاعفات مستقبلا. وان الدليل الموجز لمنظمة الصحة العالمية حديثا اوصى باستخدام مادة دواء الترانكزاميك اسيد من اجل تقليل الدم المفقود اثناء العملية القيصرية ومن ثم معالجة النزف بعد الولادة وتخفيض نسبة الاصابة بفقر الدم الشديد والحاجة الى عملية نقل الدم. وتهدف هذه الدراسة لتقييم تأثير مادة الترانكزاميك اسيد على كمية الدم المفقود أثناء العملية القيصرية ومن ثم تحديد النقص الحاصل في نسبة الهيموكلوبين والهيماتوكريت (حجم الكريات الحمر المكدسة) بعد العملية.

المرضى وطرق البحث: أجريت هذه الدراسة العشوائية المضبوطة للفترة من 15 من شهر أيلول 2021 الى ال 15 من شهر كانون الثاني 2022 في مستشفى دهوك للولادة والنسائية على 200 من النساء اللاتي تتراوح أعمارهن بين 20-40 سنة,وهن في الاسبوع 37-641+ من الحمل ممن لديهن رعاية طبية جيدة اثناء فترة الحمل ولا يعانين من أي مضاعفات او أمراض مزمنة مثل امراض الدم والقلب والكلى، الخ.. وتم اختيار وتقسيم المرضى عشوائيا الى مجموعتين: المجموعة الاولى وهي مجموعة الدراسة 1G والتي اخذت جرعة 1 غرام من مادة التراناكزاميك اسيد قبل بداية العملية والمجموعة الثانية، 2G، والتي لم تاخذ اي جرعة, والمجموعتين استلموا مادة 10 وحدات من الاوكسيتوسين بعد ولادة الطفل وهو اجراء روتيني في المستشفى لمنع حصول النزف بعد الولادة, وتم دراسة المتغيرات بين المجموعتين بواسطة استخدام حزمة SPSS 26.

النتائج: لا توجد فروق احصائية واضحة بين المجموعتين فيما يخص العمر ومستوى كتلة الجسم وعدد الولادات السابقة واسباب العمليات القيصرية، ولكن هناك فرق احصائي واضح فيما يخص كمية الدم المفقود بين المجموعين حيث كانت m29 ml 5.5± للمجموعة الاولى و429±81 ml للمجموعة الثانية والـP-value <0.001 ونفس النتيجة فيما يخص نسبة الهيموكلوبين والهيماتوكريت وكذلك الادوية الاضافية المقلصة للرحم.

الاستنتاجات: أن استخدام مادة الترانكساميك اسيد كاجراء وقائي قبل البدء بأجراء العملية القيصرية له تأثير ملحوظ في أنخفاض كمية الدم المفقود أثناء العملية وعلى نزول مستوى الهيموكلوبين والهيماتوكريت وبالاضافة الى تقليل الحاجة الى استخدام الأدوية الأضافية المقلصة للرحم.