Section: Obstetrics & Gynaecology

Original Research Article

A ROLE OF TRANEXAMIC ACID IN REDUCING BLOOD LOSS IN NORMAL LABOUR

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Abstract

Background: Though labour is a physiological process it is associated with maternal morbidity and mortality. A life-threatening obstetric hemorrhage occurs in around 1 in 1000 deliveries. Efforts to prevent and minimize maternal morbidity and death related to PPH may help to close the gap in maternal health outcomes that exists throughout the world. Thus, this study was aimed to determine the efficacy of Tranexamic acid in reducing post-partum blood loss after normal vaginal delivery. The changes in the fibrinolytic components during and immediately after placental delivery are consistent with fibrinolysis which occurs as a response to local fibrin deposition which in turn occurs as a result of tisssue damage. Hence there occurs a decrease in fibrinogen level and increase in fibrinogen degradation products. Tranexamic acid is a Competitive inhibitor of plasminogen activator.It prevents Fibrin degradation & preserving the framework of fibrin matrix structure. Hence Tranexamic acid, an anti fibrinolytic agent is used to reduce blood loss after normal delivery with an aim to decrease the incidence of excessive blood loss after delivery. **Materials and Methods:** This study is conducted among patients admitted in labour ward of Government Villupuram Medical College and Hospital for normal vaginal delivery.Study population are divided into 2 groups as follows, each having 60. The study group and the control group are treated as per Standard AMTSL protocol with along with Inj. Tranexamic acid 1gm iv infusion in 100 ml NS over 15 minutes period after delivery of baby in study group alone. In each case, the parameters like pre delivery vitals, blood loss during delivery, po st-partum vitals. pre and post delivery hemoglobin, PCV along with the need for post-partum blood transfusion and their duration of hospital stay were noted. **Results:** 120 patients were selected for the study,60 as study group and 60 as control group.50% Of the cases belonged to the age group 20- 24.75% of the cases belonged to class V socioeconomic Status. 30% Of the cases were primi gravida and 70% Of the cases were 2nd gravida 80% Of the cases were booked cases. Among the study population, in study group the mean height was 154.28 ± 1.9, the mean weight was 55.27 ± 1.83, the mean BMI was 23.21 ± 0.63 and in control group the mean height was 153.78 ± 1.74, the mean weight was 55.18 ± 1.71, the mean BMI was 23.33 ± 0.64. Among the study population, in study group 46 (76.67%) of them parity were 2nd gravida, 14 (23.33%) of them parity were primi and in control group, 43 (71.67%) of them parity were 2nd gravida, 17 (28.33%) of them parity were primi. The difference in proportion between 2 groups with respect to anthropometry, parity, induction of labour, mode of delivery were not statistically significant. Tranexamic acid significantly reduced the blood loss , need for additional uterotonics and maternal blood transfusion in the study group compared to the control group. The duration of stay was found to be reduced in the study group when compared to control group. The incidence of vomiting , shivering , fever were statistically insignificant .There was statistically significant fall in systolic blood Pressure and rise in PR in the control group compared to the study group post delivery. **Conclusion:** Parentral Tranexamic acid injection, an antifibrinolytic agent given prophylactically at the time of delivery have proven to reduce the blood loss during normal labour and reduces maternal

morbidity. As TXA readily available hemostatic agnt we strongly suggest that it should be further investigated as an adjuvant treatment in PPH prophylaxis.

INTRODUCTION

Despite the fact that normal labour is spontaneous in onset and low risk at start, it is often associated with disease and mortality. PPH is a leading cause of death and morbidity relating to pregnancy. Uterine atony is the leading cause of PPH and trauma, including iatrogenic trauma, increases the risk of PPH. A life-threatening obstetric haemorrhage occurs in around 1 in 1000 deliveries. PPH is the major cause of maternal mortality in low-income countries, accounting for around a quarter of all maternal deaths globally. Efforts to prevent and minimize maternal morbidity and death related to PPH may help to close the gap in maternal health outcomes that exists throughout the world.

Excessive blood loss after delivery is characterized by postpartum haemorrhage , a life-threatening obstetric condition. Blood loss in excess of 500 to 1000 mL is commonly classified as postpartum haemorrhage.[1 2 3]

Within 24 hours following birth, a primary postpartum haemorrhage develops.

Secondary bleeding may happen anywhere between 24 hours and 12 weeks following birth. Primary bleeding is most often caused by uterine atony, although additional causes include lacerations, coagulation disorders, and retained tissue. Retained tissue, subinvolution of the placental location, endometritis, or hereditary coagulopathy may all cause secondary postpartum bleeding.[1]

Blood loss is typically visible, and it may be measured using various methods like visual estimate, the weight of saturated gauze and linens, and/or direct blood measurement in the suction canister and collecting pouches of specially constructed drapes.[4] Unexpected blood loss may manifest as a perineal or pelvic hematoma, with symptoms such as unexplained acute pain, tachycardia, and hypotension as clinical indicators.

CBC, prothrombin time, INR, partial thromboplastin time, fibrinogen, fibrin degradation products, electrolytes, creatinine, and calcium are all helpful as a baseline for monitoring.[5,6] in high-risk patients, type and crossmatching of blood are performed ahead of time, whereas in others, it is done as soon as a bleed is detected. Rapid and simultaneous measurements are used in management.[7] Fluid resuscitation should be started immediately, followed by blood, platelets, and fresh frozen plasma transfusions as soon as possible. Identification of the cause of the bleeding, repair of lacerations, removal of retained tissue, and repositioning of the uterus (if inverted). If atony is detected, uterotonic medicines are given together with uterine massage or bimanual compression; some experts suggest tranexamic acid.[8,1]

Other procedures include uterine tamponade with a balloon or packing, uterine artery embolization or ligation, and the application of compression sutures around the uterus if conservative methods fail to stop bleeding; hysterectomy is a lifesaving last option. Diffuse intravascular coagulation, end-organ damage, infertility, and death are all possible complications. Active treatment of the third stage of labour, such as oxytocin amination, uterine massage, controlled cord traction, and manual removal of the placenta if required, are key components of prevention.[1,9]

The variations in fibrinolytic components during and soon after placental delivery are consistent with fibrinolysis, which occurs in response to local fibrin deposition caused by tissue injury. As a result, the amount of fibrinogen decreases while the level of fibrinogen degradation products increases. Hence antifibrinolytics will be effective in reducing blood loss by interacting with the fibrinolytic mechanism.

In a series of controlled studies on PPH in vaginal deliveries TXA proved capable of reducing the extent of peripartum bleeding and time to hemostasis. Similarly, administration of TXA in the course of cesarean sections resulted in a reduction of bleeding time and blood loss and, in some studies, of transfusion needs. According to a Cochrane analysis of two randomized, controlled studies administration of 0.5 g and 1 g, respectively, of TXA reduced both blood loss and transfusion needs after vaginal births and cesarean sections. Accordingly, the European Society of Anaesthesiology (ESA) recommends administration of TXA in the case of peripartum and postpartum hemorrhage in order to reduce the extent of blood loss, the duration of bleeding and the need for allogeneic blood products.

TXA is a competitive inhibitor of plasminogen activation and can reduce bleeding by inhibiting the breakdown of fibrinogen and fibrin clots. Based on evidence for the benefit of TXA in improving trauma care outcomes, WHO's recommendations for prevention and treatment of PPH included a conditional recommendation to use TXA for treatment of PPH when uterotonics fail to control the bleeding or the bleeding is thought to be due to trauma.

Because randomized studies in women with PPH are difficult to conduct, the use of tranexamic acid to prevent PPH in women might be used as a proxy for evaluating its effectiveness in treating PPH.

Aim and Objective of the Study

To study the efficacy of Tranexamic acid in reducing post-partum blood loss after normal vaginal delivery

Primary Objective

To Estimate the reduction in post-partum blood loss after normal vaginal delivery by giving parentral

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Tranexamic acid in addition to active management of third stage of labour

Secondary Objective

1. To compare the amount of blood loss in patients receiving tranexamic acid with those not receiving the drug.
2. To compare the requirement of maternal Blood transfusion
3. To compare the duration of Hospital stay in both groups
4. To compare the changes in blood indices in both the groups
5. Usage of any extra uterotonics.

MATERIALS AND METHODS

Study Design: A Prospective Randomised Control study.

Centre: Government Villupuram Medical College and Hospital.

Study Population: All women with singleton term pregnancies , fulfilling both inclusion criteria and planned for vaginal delivery at Labour Ward , Govt Villupuram Medical College,Villupuram

Sample Size: 120(According to prevalence in previous literature reviews)

Study Period: 1 year Inclusion

1. Antenatal mothers of Age ≥ 18 years admitted in labour ward , Gvmch
2. primi / 2nd gravida
3. Gestational age of more than 38 weeks
4. Planned Vaginal Delivery
5. Singleton Pregnancy
6. Informed consent form signed

Exclusion Criteria

1. Haemoglobin < 8gm%
2. Twin pregnancy
3. Polyhydramnios
4. Estimated Fetal Weight > 4 kg
5. Previous H/o PPH
6. Fibroid complicating pregnancy
7. Preeclampsia
8. Placenta previa
9. Abruptio placenta
10. Prolonged and obstructed labour
11. Heart disease complicating pregnancy
12. Renal Liver disease patients
13. Patients on anticoagulants
14. Previous H/o Venous (Deep Vein Thrombosis / Pulmonary Embolism) or arterial (Angina pectoris, Myocardial Infarction, Stroke) thrombosis
15. Gravidity ≥ 3
16. Patients who are not willing

Study Group: Standard AMTSL protocol Inj. Tranexamic acid 1gm iv infusion in 100 ml NS over 15 minutes period after delivery of baby

Control Group: Standard AMTSL protocol

Equipments Required: Calibrated obstetric drape Preweighed sanitary napkins Immediately after delivery of the baby, when all the liquor was drained, the patient was brought to the edge of the table and the patient was placed over a blood drape, a disposable, conical, graduated plastic collection bag.

The amount of blood collected in the blood drape is measured. Then the patient was given pre- weighed pads, which was weighed 2 hours postpartum In our study blood loss were measured by measuring the blood collected in the drape and by weighing the swabs before and after delivery.

Total blood loss (ml) = Blood in the drape (ml) + (swab weight postdelivery in gms - swab weight predelivery in gms) 1gm increase in weight= 1ml blood loss

Study group and Control group patients receive the iv infusion as mentioned.

In each case the following parameters should be noted.

1. Predelivery PR, BP, RR, SpO2, urine output in ml / hr, Hb gm%, PCV%
2. Blood loss from delivery of the baby to 2hrs post partum
3. Side effects of the drug like nausea ,vomiting ,diarrhea ,Giddiness hypotension ,Thromboembolism(rare) if occurs should be noted
4. Post partum PR, BP, RR, SpO2, urine output in ml / hr,
5. Hb gm%,PCV% 48 hours post delivery 6. Maternal need for blood transfusion post delivery.

Primary Outcome: Reduction in post-partum blood loss after normal vaginal delivery by giving parentral tranexamic acid in addition to active management of third stage of labour

Secondary Outcome:

1. Reduction in amount of blood loss in patients receiving tranexamic acid with those not receiving the drug.
2. Requirement of maternal Blood transfusion 3.Duration of Hospital stay
3. Changes in blood indices
4. Usuage of any extra uterotonics.

Data Analysis and Interpretation

Data was entered into Microsoft Excel (Windows 7; Version 2007) and analyses were done using the Statistical Package for Social Sciences (SPSS) for Windows software (version 22.0; SPSS Inc, Chicago). Descriptive statistics such as mean and standard deviation (SD) for continuous variables, frequencies and percentages were calculated for categorical Variables were determined. Association between Variables was analyzed by using Chi-Square test for categorical Variables. Comparison of mean of quantitative variables were analyzed using unpaired t test. Bar charts and Pie charts were used for visual representation of the analyzed data. Level of significance was set at 0.05.

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RESULTS

Table 1: Comparison of mean of parameter between group(N=120)

Parameter	Group (Mean± SD)		P val ue
	Study group (N=60)	Controlgroup (N=60)	
Duration of 3rd stage inmins	4.6 ± 0.63	4.46 ±0.48	0.16 7
Mean blood loss at time of delivery to 30 min	80.15 ± 37.7	189.07 ± 51.09	<0. 001
Mean blood loss at 30 min to 2 hrs	26.81 ± 15.33	48.16 ± 27.61	<0. 001
Total blood loss	106.96 ± 52.96	237.07 ± 78.56	<0. 001

Among the study population, in study group the mean Duration of 3rd stage in mins was 4.6 ± 0.63, the Mean blood loss at time of delivery to 30 min was 80.15 ± 37.7, the Mean blood loss at 30 min to 2 hrs was 26.81 ± 15.33, the mean total blood loss was 106.96 ±
52.96 and in control group the mean Duration of 3rd stage in mins was 4.46 ± 0.48, Mean blood loss at time of delivery to 30 min was
189.07 ± 51.09, Mean blood loss at 30 min to 2 hrs was 48.16 ± 27.61, the mean total blood loss was 237.07 ± 78.56.
The mean difference of time of delivery, 30 min to 2 hrs, total blood loss between study and control group were statistically significant. (p value <0.05). The mean difference of duration of 3rd stage in mins between both group was not statistically significant. (p value >0.05) Table 1.
1-Duration of 3rd stage in mins, 2- Time of Delivery to 30 min, 3- 30 min to 2 hrs, 4- Total

Table 2: Comparison of maternal blood transfusion between group (N=120)

Maternal Blood Transfusion			Chi square	Fisher exactP value
	Study Group (N=60)	ControlGroup (N=60)		
Yes	1 (1.67%)	4 (6.67%)	1.878	0.036
No	59 (98.33%)	56 (93.33%)		

Among the study population, in study group one (1.67%) of them had Maternal Blood Transfusion and 4 (6.67%) of them had Maternal Blood Transfusion. The difference in proportion of maternal blood transfusion between the both groups was statistically significant. (p value 0.036) Table 2.

Table 3: Comparison of mean of Hb & PCV between group(N=120)

Parameter	Group (Mean± SD)		P value
	Study Group (N=60)	ControlGroup (N=60)	
Hb	8.9 ± 0.82	7.01 ± 0.35	0.021
PCV	39.07 ± 1.96	37.73 ± 2.18	0.04 3

Among the study population, in study group the mean HB was 8.9
± 0.82, the mean PCV was 39.07 ± 1.96 and in control group the mean HB was 7.01 ± 0.35, the mean PCV was 37.73 ± 2.18. The mean difference of HB and PCV between both group were statistically significant. (p value <0.05) Table 3
1-HB, 2- PCV
Among the study population, in study group 2 (3.33%) of the participants administered additional uterotonics and in control group 4 (6.67%) of the participants used additional uterotonics. The difference in proportion of used additional uterotonics between study and control group was statistically significant. (p value 0.043) Table 4.

Table 4: Comparison of additional uterotonics between group(N=120)

Additionaluterotonics	Group (Mean± SD)		P value
	Study group (N=60)	Controlgroup (N=60)	
Yes	2 (3.33%)	10 (16.66%)	0.043
No	58 (96.67%)	50 (83.33%)	

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Table 5: Comparison of duration of hospital stay between groups (N=120)

Duration ofStay at hospital 3Days	Study Group (N=60)	Control Group(N=60)	Chi square	Fisherexact P value
Yes	1 (1.67%)	4 (6.67%)	1.878	0.0364
No	59 (98.33%)	56 (93.33%)		

Among the study population, in study group 1 (1.67%) of the participant duration of stay were 3 days and in control group 4 (6.67%) of the participants duration of stay were 3 days. The difference in proportion of duration of the stay between both groups was statistically significant. (p value 0.036) Table 5.

Table 6: Comparison of mean of vital signs parameter between group (N=120)

Parameter	Group (Mean± SD)		P value
	Study group (N=60)	Controlgroup (N=60)	
PR (pre-delivery)	82.2 ± 2.67	82.1 ± 2.91	
PR (post-delivery)	87.75 ±3.01	92.68 ± 2.6	<0.001
Change	+5.67	+10.58	
Systolic blood pressure delivery) (pre-	115.07 ± 5.47	117.13 ± 5.4	
Systolicpressure blood(post-	118.43 ± 5.75	127.47 ±5.24	0.0338
delivery)	+3.36	+10.34	
Change			
Diastolic blood			
pressure (pre-			
delivery)	74.5 ± 5.56	78.37 ± 4.55	
Diastolicpressure blood(post-	78.27 ± 5.5	88.18 ± 4.63	<0.001
delivery)	+3.77	+9.81	
Change			
	17.82 ±		
RR (pre-delivery)	0.91	18.07 ± 0.8	
RR (post-delivery)	17.78 ±	16.13 ± 0.83	0.033
Change	0.94	+1.94	
	+0.04		
SPO2 delivery) (pre-	99.9 ± 0.3	99.92 ± 0.28	
SPO2 (post- delivery)	98.15 ±0.22	93.68 ± 0.47	<0.001
Change	+1.75	+6.24	
Urine output ml/hr	110.08 ±	109.08 ±	
(pre-delivery)	12.61	11.94	
			0.183
Urine output ml/hr	106.31 ±	105.08 ±	
(post-delivery)	4.31	2.25	
Change	+3.77 +4		

Among the study population with pre-delivery, in study group the mean pulse rate was 82.2 ± 2.67, the mean SBP was 115.07 ± 5.47, the mean DBP was 74.5 ± 5.56, the mean RR was 17.82 ± 0.91, the mean SPO2 was 99.9 ± 0.3 and the mean Urine output ml/hr was
110.08 ± 12.61 and in control group the mean pulse rate was 82.1
± 2.91, the mean SBP was 117.13 ± 5.4, the mean DBP was 78.37
± 4.55, the mean RR was 18.07 ± 0.8, the mean SPO2 was 99.92 ±
0.28 and the mean Urine output ml/hr was 107.08 ± 11.94.

Among the study population with post-delivery, in study group the mean pulse rate was 87.75 ± 3.01, the mean SBP was 118.43 ± 5.75, the mean DBP was 78.27 ± 5.5, the mean RR was 17.78 ± 0.94, the mean SPO2 was 99.9 ± 0.3 and in control group the mean pulse rate was 92.68 ± 2.6, the mean SBP was 127.47 ± 5.24, the mean DBP was 88.18 ± 4.63, the mean RR was 16.13 ± 0.83, the mean SPO2 was 93.68 ± 0.47.

The mean difference of post delivery PR, SBP, DBP, RR, SPO2 between both group was statistically significant. (p value <0.05). Table 6

1-PR,2-SBP,3-DBP,4-RR,5-SPO2,6- Urine output ml/hr

DISCUSSION

Since obstetric blood loss accounts for one-fourth of all maternal deaths worldwide, death from PPH should be prevented. Anti-fibrinolytic drugs can be used to minimize obstetric blood loss since the

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fibrinolytic system is activated following placental delivery.

Because prevention is usually better than cure when it comes to PPH, tranexamic acid, an antifibrinolytic drug, was administered prophylactically in our trial to see how effective it was at minimising blood loss during and after vaginal birth. Studies found that women with PPH are difficult to manage; the use of tranexamic acid to prevent PPH in women might be used as a proxy for evaluating its effectiveness in treating PPH.

Hence the aim of the study is to estimate To Estimate the reduction in post partum blood loss after normal vaginal delivery by giving parentral tranexamic acid in addition to active management of third stage of labour and to compare the amount of blood loss in patients receiving tranexamic acid with those not receiving the drug, requirement of maternal Blood transfusion, duration of Hospital stay, changes in blood indices and Usage of any extra uterotonics.

In our study, majority of the participants had belonged to the age group of 20-25 years, this may be due to suitable age for a woman to reproduce and there was no statistical difference among both the groups (p value 0.832). This denotes that the groups were similar when compared with respect to age in years. In a study conducted by Yang H, Shi C-Department of Obstetrics and Gynecology, Beijing University's first teaching hospital, Beijing, China in October 2001, the average age was 23.5 years.

In our study, majority of the participants were from the class V Socio-economic status in both the groups. The difference found among is not statistically significant (p value 0.092). In a study conducted by the department of obstetrics and gynaecology – Ayub medical college, Pakistan, by Shamshad Bibi et al in 2009, 74% in the study group and 76% in the control group belonged to class V socioeconomic status.

Among the study population, majority were with the parity of 2nd gravida. Of them, 76.67% and 71.67% were in study and control group respectively. The difference in proportion of parity between study and control group was not statistically significant. (p value 0.532).

Among our study population, two-third of the participants had booked pregnancy in both the groups. Panagiotis and Rezan from the Department of Obstetrics and Gynaecology, London, did a similar study in March 2011 and found that 86 percent of the study group and 88 percent of the control group were scheduled. Proper prenatal care is critical for identifying and correcting high risk factors during the antenatal period, hence lowering the risk of PPH.

Among the study population, in study group, nearly half of them had spontaneous labour, 41.67% of them had inuced labour and in control group, half of them had spontaneous labour, 48.33% of them had induced labour. Majority of the participants had spontaneous labour. The difference in proportion of Onset of labour between study and control group was not statistically significant. (p value 0.463). However in a study conducted by Dahlke JD et al. in Prevention and management of postpartum hemorrhage found that induced labour is a risk factor for post-partum hemorrhage and positively correlated.[2]

In light of mode of delivery, majority of the participants i.e two- third of the participants had Labour natural. When comparing the mode of delivery among the study groups, statistical significance is found (p value 0.379).

Among the study population, in study group one (1.67%) of them had Blood Transfusion and 4 (6.67%) of them had Blood Transfusion. The difference in proportion of blood transfusion between study and control group was statistically significant. (p value 0.036). However, the control group who did not receive the drug had higher transfusion rates. Hence we can conclude that the study group did not need the transfusion.[6,8]

Among the study population with maternal complication, only one-tenth of the participants had vomiting among both the study and control groups, however majority of the participants did not have any symptom such as nausea, fever and vomiting.

Among the study population, majority of the participants did not have the APGAR score greater than 8/10 in both the groups. The difference in proportion of APGAR between study and control group was not statistically significant (p value 0.679). The conclusion was that the use of tranexamic acid had no effect on infant outcome in our investigation. Also, there was no significant change in Apgar scores between the study and control groups in a similar trial undertaken by the Department of Obstetrics and Gynecology at King's College Hospital in London.[10]

Among the study population, participation with duration of stay with greater than 3 days was 1% and 7% in study group and control group respectively. The difference in proportion of duration of the stay between study and control group was statistically significant. (p value 0.036). However, the clinical inference can be taken as that those with tranexamic acid had lesser duration of stay in hospital than with those without tranexamic acid.

The mean height in the study group was 154.28, the mean weight was 55.27 , and the mean BMI was 23.21, while the mean height in the control group was 153.78, the mean weight was 55.18, and the mean BMI was 23.33. The anthropometric parameter mean difference between the study and control groups was not statistically significant. The average height and weight of the participants in a comparable study conducted by Shanghai International Pence maternity and child health hospital in Shanghai, China, were 153 cm and 62 kg, respectively, and the control group was not statistically significant.

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The change in the SBP, DBP, RR, PR, SPO2 (pre and post- delivery) among the study subjects was statistically significant. This means that there is considerable amount of change that has occurred after the usage of tranexamic acid. There was a significant fall in SBP and rise in PR without any significant change in RR. In a similar study conducted by Natalia Novikova et al in 2010, there was a statistically significant change in vital parameters.

Among the study population, 96% of the study subjects did not used additional uterotonics in study group and 87% did not used additional uterotonics. The difference in proportion of used additional uterotonics between study and control group was statistically significant. (p value 0.043). The medication reduces the requirement for extra uterotonics considerably. Only 4% of the study group required further uterotonics, according to Leila Shekhavat et al 2009, Department of Obstetrics and Gynecology, Shahid Sedughi Hospital / Shahid Sedughi University of medical sciences and health services, Yazd, Iran.

The duration of labour among both the study and control group was not statistically significant. However, the blood loss difference between the study and control group is statistically significant with p value of <0.001. Hemorrhage, embolism, and hypertensive disorders of pregnancy are the most common causes of pregnancy related mortality. CJ Berg et al., 1996.

Prendiville et al. detected 5.9% postpartum haemorrhage in the actively managed group and 17.9% in the physiologically managed group in the Bristol Third Stage Trial. They came to the conclusion that intervening in the third stage of labour lowers the risk of PPH by 30–40%.

MrCormick et al. presented a systematic analysis of research that evaluated the effectiveness of intervention in the third stage and found that it reduced the incidence of PPH, reduced the requirement for blood transfusion, and reduced the need for further uterotonic medications.

Potts, Malcolm — The year 2006 What matters in Darwinian evolution is what works, not what is attractive, safe, or appealing. The human placenta leaves a massive, 20cm diameter incision on the interior of the uterus upon birth, due to a very invasive trophoblast. Only strong uterine contractions and a well-functioning coagulation process may prevent potentially catastrophically severe bleeding. Any intervention focused at avoiding PPH would decrease maternal mortality by more than a fifth, according to Udofia et al.[1-5]

CONCLUSION

Summary

The study was conducted in department of obstetrics and gynaecology in Villupuram medical college to observe the efficacy of tranexamic acid in reducing the blood during normal labour.120 patients were selected for the study,60 as study group and 60 as control group.50% Of the cases belonged to the age group 20-24.75% Of the cases belonged to class V socioeconomic Status .30% Of the cases were primi gravida and 70% Of the cases were 2nd gravida 80% Of the cases were booked cases.There was no statistical significant difference in subjective characters in between the two groups. Hb and pcv was significantly reduced in control group compared to the study group Tranexamic acid significantly reduced the blood loss ,need for additional uterotonics and maternal blood transfusion in the study group compared to the control group

The duration of stay was found to be reduced in the study group when compared to control group

The incidence of vomiting , shivering , fever were statistically insignificant. There was statistically significant fall in systolic blood Pressure and rise in PR in the control group compared to the study group.

Parentral Tranexamic acid injection, an antifibrinolytic agent given prophylactically at the time of delivery have proven to reduce the blood loss during normal labour and reduces maternal morbidity . As TXA readily available hemostatic agent we strongly suggest that it should be further investigated as an adjuvant treatment in PPH prophylaxis.

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