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Research Article

**TO STUDY THE ROLE OF TRANEXAMIC ACID IN REDUCING
MATERNAL MORTALITY AND NEED OF SURGICAL INTERVENTION
WITH CLINICALLY DIAGNOSED POSTPARTUM HEMORRHAGE
(PPH) IN WOMEN****¹Dr. Mahe talat, ² Dr. Maimunah Faruque Malik, ³ Dr Nuzhat kanwal**¹Ameer-ud-din Medical College² Ameer -Ud-Din Medical College³ Quaid e Azam medical college bwp**Article Received:** October 2019 **Accepted:** November 2019 **Published:** December 2019**Abstract:**

Background- The percentage of deaths greater than 25% are due to postpartum hemorrhage and to decrease the maternal mortality find out the treatment of PPH is very important.

Objective- The objective of this study is to analyze that either tranexamic acid and antifibrinolytic agent reduce the rate of maternal mortality or not with the need of surgical intervention with diagnosed PPH in women and to determine that either tranexamic acid has adverse drug reaction or not.

Methodology- This study was conducted in Mayo hospital Lahore. A lot of women were enrolled for this study to diagnosed PPH. All the patients were subdivided into two groups. First group was control group and second group was study group. BRASS-V drape was used to collect the sample and blood and to differentiate them. In this study the main reasons of maternal mortality was diagnosed. For failed medical management and due to this the need of surgical intervention and PPH was observed. Due to the use of tranexamic acid, side effect of this was also observed.

Result- From different perspectives for example parity distribution, delivery type, age and postpartum hemorrhage' causes both groups were compared. In first group that is control group 744 ± 102 ml was the mean loss in blood and in study group 626 ± 113 ml due to the use of tranexamic acid, the difference in these group was very significant. In both groups no patients was observed maternal mortality due to the PPH treatment failure. Blood loss can be reduced by tranexamic acid. The need of surgical intervention due to the treatment failure of PPH was also not observed in any patient.

Conclusion- From this study it was concluded that blood loss can be reduced by tranexamic acid and due to this maternal mortality in patients can also be reduced by PPH

Keywords: Blood loss, tranexamic acid, maternal mortality, postpartum hemorrhage

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INTRODUCTION:

Postpartum hemorrhage is develop by fourteen million mothers annually and 2% is death rate of them. To minimize the too much loss of blood for preventing the clot breakdown in surgery anti-fibrinolytic agents are commonly used. The recommendation about the use of tranexamic acid for PPH treatment is present in this study. To prevent the maternal mortality in PPH through the use of tranexamic acid is under discussion in this study and if it can be proved that maternal mortality can be reduced through tranexamic acid then it will be very significal in medical world. In worldwide one fourth deaths occur due to PPH, so to decrease this death rate an effective treatment is required. Tranexamic acid reduces the blood loss maternal mortality and anemia. The goal of this study is to observe that tranexamic acid and antifibrinolytic agent can reduce the rate of maternal mortality or not and need of surgical intervention due to diagnosed PPH in women.

METHODOLOGY:

Hundred women were selected for this study to diagnosed PPH. This study was conducted in Mayo hospital Lahore. A written consent agreement was signed by all the patients. Total 100 women was selected in whom PPH was diagnosed and those women were excluded who had several kind of complications like heart, liver and brain disease or any kind of allergy. Selection was done by considering that the blood loss was greater than 500ml during vaginal delivery or not.

All the patients were subdivided into two groups. First group was control group and second group was study group. BRASS-V drape was used to collect the sample and blood and to differentiate them as in fig 1. In this study the main reasons of maternal mortality was diagnosed. For failed medical management and due to this the need of surgical intervention and PPH was

observed. Due to the use of tranexamic acid, side effect of this was also observed.

In both groups no patients was observed maternal mortality due to the PPH treatment failure. Blood loss can be reduced by tranexamic acid. The need of surgical intervention due to the treatment failure of PPH was also not observed in any patient.

In this following thing that were observed first one was due to the use of tranexamic acid side effects was chest pain, calf pain, and visual disturbances noted. Required surgical intervention due to the treatment failure in medical management was observed, the causes of maternal mortality was observed.

Findings:

From different perspectives for example parity distribution, delivery type, age and postpartum hemorrhage' causes both groups were compared. In first group that is control group 744 ± 102 ml was the mean loss in blood and in study group 626 ± 113 ml was in tranexamic acid, the difference in these group was very significant. In both groups no patients was observed maternal mortality due to the PPH treatment failure. Blood loss can be reduced by tranexamic acid. Hence it can say that the tranexamic acid group is more efficacy as compared to the control group. The need of surgical intervention due to the treatment failure of PPH was also not observed in any patient.

Table 1 show that in both group none of the patient required surgical intervention due to the failure in treatment of PPH and also no side effect was observed for tranexamic acid.

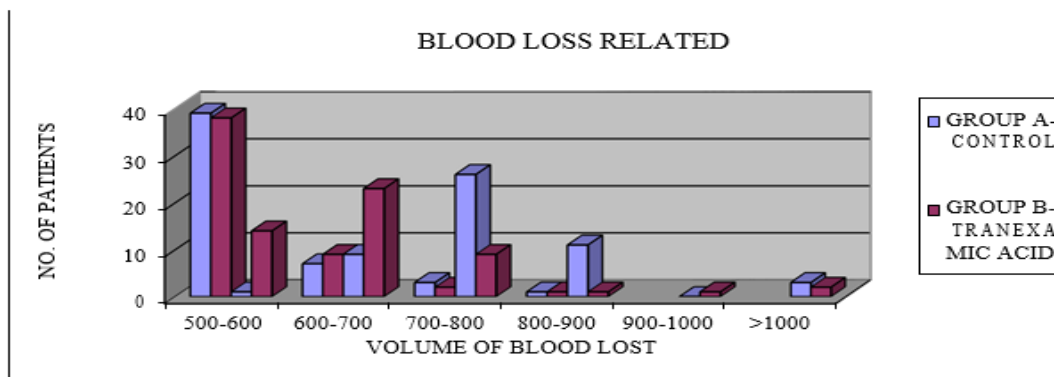


Fig1. Blood loss in both group test

Table 1: Maternal mortality, need for surgical intervention and side effect

		Control	Tranexamic acid
1.	Maternal Mortality	nil	nil
2	Hysterectomy	nil	nil
3	Thrombogenic side effects on mother or baby	nil	nil

DISCUSSION:

In this study it was observed that tranexamic acid is very helpful in case of too much blood loss as in control group 744±102ml was the mean loss in blood and in study group with tranexamic acid 626±113ml was mean blood loss. The difference in both of them is very significant. Comparative examination did by a researcher(3) indicated that tranexamic corrosive

altogether diminishes the loss in blood during vaginal delivery. These outcomes are relatable with present examination. In the present examination no maternal mortality happened because of disappointment of therapeutic treatment for PPH. In this present investigation no patients required careful mediation or hysterectomy for treatment of PPH.

Table 2: Comparison of findings of present study with others studies (control group)

Sl No	Parameters	Yang H et al ⁽⁴⁾ (2001)	Ming-ying Gai et al ⁽³⁾ (2004)	Gohel M et al ⁽⁵⁾ (2007)	Anne-sophie D et al ⁽⁶⁾ (2011)	Present Study
1	Blood loss	314.8ml	439.36±191.48 ml	472.79±43.54	-	744±102ml
2	Maternal mortality	Nil	Nil	Nil	-	Nil
3	Any surgical intervention or Hysterectomy	-	-	Nil	2	Nil

Table 3: Comparison of results of present study with others studies (tranexamic acid) group)

Sl No.	Parameters	Yang H et al ⁽⁴⁾ (2001)	Ming-ying Gai et al ⁽³⁾ (2004)	Gohel M et al ⁽⁵⁾ (2007)	Anne-sophie D et al ⁽⁶⁾ (2011)	Present Study
1	Blood loss	243.3ml	359.29±152.02ml	374.92±51.46 ml	-	626±113ml
2	Maternal mortality	Nil	Nil	Nil	-	Nil
3	Any surgical intervention or hysterectomy	Nil	Nil	Nil	Nil	Nil

CONCLUSION:

From this study it was concluded that blood loss can be reduced by tranexamic acid and due to this maternal mortality in patients can also be reduced by PPH

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