

Comparison Between International Federation of Gynaecology and Obstetrics Guidelines Versus Conventional Method for the Treatment of Third Stage Labour

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ABSTRACT

Objective: To observe the comparison between International Federation of Gynaecology and Obstetrics guidelines versus conventional method for the treatment of third stage labour.

Study Design: Quasi experimental study

Place and Duration of Study: This study was conducted in Gynaecology and Obstetrics Department at Pak Red Crescent Medical & Dental College, Dina Nath, Kasur from July 2019 to December 2019.

Materials and Methods: It was a quasi experimental study and consisted of a total 100 labouring women after gestational period of 28 weeks till 41 weeks having spontaneous labour or augmented labour. Fifty women were managed conservatively and 50 women managed by FIGO guideline.

Results: The patients were divided into 2 groups, 50 in each group. Group A was managed by FIGO guideline and group B was managed by conventional method. As compared to group A, in group B the risk of PPH, need of blood transfusion was significantly high and there was significant reduction in haemoglobin percentage after delivery in group B as compared to group A. Other side effects like headache, nausea, vomiting are also higher in group B as compared with group A.

Conclusion: It is concluded that FIGO guidelines are more efficacious in prophylaxis of PPH. The conventional method of third stage of labour with minimal side effects and can safely be administered to hypertensive patients.

Key Words: Post partum haemorrhage, Conventional method, Uterotonic agents and Third stage labour.

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INTRODUCTION

In the worldwide postpartum haemorrhage (PPH) is a main cause of maternal mortality and morbidity. A major part of the cases happen in immediate postpartum period within 24 hours after birth and are because of uterine atony, which is a failure of uterus to appropriately contract after kid is born. In this way bleeding from blood vessels is not controlled.

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There are 14 million cases of postpartum haemorrhage (PPH) in every year. PPH accounts for approximately 25% of maternal deaths worldwide¹ and for up to 60% of deaths in developing countries.² In industrialized world, life threatening PPH happens with a recurrence of 1 per 1000 deliveries.³ Massive PPH term has been introduced as blood loss of more than >1000ml or 1500ml after delivery, being mainly responsible for maternal mortality and morbidity.⁴ Globally haemorrhage accounts for 28% of all maternal deaths.⁵ As estimation of blood loss is typically subjective, extreme haemorrhage has been characterized as evaluated blood loss (EBL) >1500ml, peripartum fall in haemoglobin (Hb) concentration of ≥ 4 gm/dl or intense transfusion of 4 at least units of blood.⁶

According to local estimate obstetrical haemorrhage was leading cause of maternal mortality (43%) with PPH occurring in 14% maternal deaths. Another study of maternal deaths in developing countries showed the rate of PPH 30% in about 125 million births a year.⁷⁻⁸ Uterine atony, due to various underlying risk factors, is major cause of PPH.⁹ Antenatal risk assessment predicts only 40% of those who will have PPH.⁵ As every woman is potentially at risk of having PPH, active management of third stage of labour should be

offered to all women. The benefits of active treatment of third stage labour are well documented and this practice has saved many lives in developing countries.¹⁰⁻¹²

MATERIALS AND METHODS

This quasi experimental study was done in Gynaecology and Obstetrics Department at Pak Red Crescent Medical & Dental College, Dina Nath, Kasur from July 2019 to December 2019. One hundred women were included in this study and divided into two groups, 50 in group A (FIGO guideline) and 50 in group B (Conventional). Informed consent from patient was taken for information and record maintenance. Patients attending Gynae/Obs OPD and labour room were assessed for inclusion criteria, both booked and un-booked patients were considered. A complete history of patient was taken and physical examination was done. Routine investigations including ultrasonography were done. Women were randomly allocated to FIGO/ICM group according to serial numbers i.e. every 2nd case. Fifty women were administered conventional management of third stage of labour. Statistical analysis was done on SPSS-20 version software. Descriptive statistics like age and parity were analyzed. Maternal outcome analysis was scrutinized with cross-tabulation on basis of further therapeutic measures. Number of blood transfusions were fall in haemoglobin and estimated blood loss in each group. Frequency or proportion were computed for categorical variables like past history, complication. Mean was computed for quantitative variable like age. Chi-square test was used to compare complication between groups (FIGO guideline vs conventional). $P \leq 0.05$ was considered level of significance.

RESULTS

The mean age of patients in group A was 31.25 ± 5.3 years while in group B was 30.52 ± 5.4 . Out of fifty 29 (58%) patients were in age group between 20-30 years in group A, while 21 (42%) patients were in group B. Twenty one (42%) patients were in age group between 31-40 years in group A, while 23 (46%) patients were in group B (Table 1).

The labour characteristics were 21 (42%) patients in group A and 23 (46%) in group B. Twenty nine (58%) patients were spontaneous labour in group A and 27 (54%) patients in group B (Table 2).

The mean antenatal haemoglobin was 9.49 ± 0.60 in group A and 9.25 ± 0.68 which is statistically not significant ($P > 0.05$). The post delivery haemoglobin was 9.32 ± 0.49 in group A and 9.51 ± 0.73 in group B which is statistically not significant ($p 0.39$ (Table 3).

The renal failure complication was 4 (8%) in group A while 6 (12%) in group B which is statistically significant ($P 0.05$). Uterine atony 9 (18%) in group A and 18 (36%) in group B which is statistically

significant ($p 0.04$). Myocardial ischemia was 1 (2%) patients in group A while 2 (4%) patients in group B ($p 0.03$) (Table 4). The estimated blood loss was 513.00 ± 163.47 ml in group A and 652.00 ± 234.09 ml in group B which is statistically significant ($P < 0.05$) (Table 5).

Table No.1: Age Distribution of Patients (n=100)

Age in years	Group A (n=50) (Figo/ICM)		Group B (n=50) (Conventional)	
	No.	%	No.	%
20-30	29	58.0	27	54.0
31-40	21	42.0	23	46.0
Mean \pm SD	31.25 \pm 5.3		30.52 \pm 5.4	

Table No.2: Distribution of Labour Characteristics (n=100)

Labour Characteristics	Group A (n=50)		Group B (n=50)	
	No.	%	No.	%
Augmented labour	21	42.0	23	46.0
Spontaneous labour	29	58.0	27	54.0

Table No.3: Comparison of Antenatal and Post Antenatal Haemoglobin (n=100)

Haemoglobin	Group A (n=50)	Group B (n=50)	P value
Antenatal	9.49 ± 0.60	9.25 ± 0.68	0.35
Post antenatal operative	9.32 ± 0.49	9.51 ± 0.73	0.39

Table 4: Comparison of Complications of Patients (n=100)

Complications	Group A (n=50)	Group B (n=50)	P value
Renal failure	4 (8%)	6 (12%)	0.05
Uterine atony	9 (18%)	18 (36%)	0.04
Myocardial ischemia	1 (2%)	2 (4%)	0.03

Table No.5: Comparison of Estimated Blood Loss (EBL) ml of Patients (n=100)

	Group A (n=50)	Group B (n=50)	P value
Estimated blood loss	513 ± 163.47	652 ± 234.09	<0.001

The nausea was in 16 (32%) patients in group A and 20 (40%) in group B. Nausea + vomiting was 5 (10%) patients in group A and 7 (14%) in group B. The other complications were headache 1 (2%), nausea + vomiting 5 (10%), headache + nausea + vomiting 2 (4%), headache and vomiting 1 (2%) and headache & nausea 1 (2%) in group A while in group B headache 3 (6%), nausea & vomiting 7 (14%), headache + nausea & vomiting 6 (12%), headache & vomiting 4 (8%) and headache & nausea 5 (10%) in group B respectively

(Table 6). The blood transfusion in group A was 7 (14%) patients and in group B 17 (34%) patients (Table 7).

Table No.6: Comparison of Symptoms after Delivery of Patients (n=100)

Symptoms	Group A (n=50)		Group B (n=50)	
	No.	%	No.	%
Headache	1	2.0	3	6.0
Nausea	16	32.0	20	40.0
Nausea + vomiting	5	10.0	7	14.0
Headache + nausea + vomiting	2	4.0	6	12.0
Headache + vomiting	1	2.0	4	8.0
Headache + nausea	1	2.0	5	10.0

Table No.7: Frequency of Blood Transfusion (n=100)

Blood Transfusion (units)	Group A (n=50)		Group B (n=50)	
	No.	%	No.	%
1 unit blood	7	14.0	17	34.0

DISCUSSION

Primary postpartum haemorrhage is the postpartum blood loss of 500ml or more in the first 24 hours. Massive PPH term has been introduced as blood loss of more than 1000ml, 1500ml after delivery, being mainly responsible for maternal mortality and morbidity.⁴ Globally haemorrhage accounts for 26% of all maternal deaths.⁵ In industrialized world life threatening PPH happens with a recurrence of 1 per 1000 deliveries.³

Uterine atony is the most widely recognized reason for PPH and happen in the prompt postpartum period because of different underlying risks factors.⁹ Other risk factors for postpartum haemorrhage are multiparity, retained placenta, fetal macrosomia (>4kg), prior PPH, genital tract laceration, chorioamnionitis and prolonged labour.⁴⁻⁶

As each female is potentially at risk of having PPH, dynamic treatment of third stage of labour should be offered to all females. The advantages of dynamic treatment of third stage of labour are well documented. Post partum haemorrhage is a great extent preventable complication of third stage labour as many patients at risk may be recognized having pregnancy or labour and proper steps taken to prevent blood loss.¹⁰⁻¹¹

The patients characteristics including age, gestational amenorrhoea, parity, duration of labour and outcome after delivery like, blood loss in 24 hours of delivery, post delivery haemoglobin percent, need for blood transfusion and other symptoms like, nausea, vomiting and headache and increase in blood pressure were

evaluated. In our study there was greater mean blood loss in group B as compared with group A as shown by the antenatal and post natal haemoglobin concentration (p 0.01).

A study reported uterine atony was the most common cause of PPH. This is comparable to one study in which 16 patients in group A and 34 patients in group B had uterine atony which is statistically significant.¹³

In this study the complications like renal failure was 8% group A, 12% in group B. Rise in systolic and diastolic circulatory strain after delivery is fundamentally higher in group B as compared to group A. Other complications i.e nausea was 32% and 40% respectively. Nausea and vomiting was 10% and 14%, headache was 2% and 6% respectively.¹⁴

CONCLUSION

It is concluded that Federation of Gynaecology and Obstetrics Guide lines for the treatment of third stage labour are more efficacious in prophylaxis of post partum haemorrhage. The conventional method of third stage of labour with minimal side effects and can safely be administered to hypertensive patients.

Author's Contribution:

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Conflict of Interest: The study has no conflict of interest to declare by any author.

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