

# Pharmacological Management of Postpartum Hemorrhage by Giving P/R Misoprostol after Failure of Syntocinon

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## ABSTRACT

**Aim:** To determine the effect of one Tablet Misoprostol 200mg in management of Postpartum Hemorrhage due to uterine atony after failure of syntocinon.

**Study design:** Observational Descriptive Study.

**Place and duration of study:** Study was conducted in Nishtar Hospital Multan in 1 year.

**Method:** 100 cases of Post Partum Hemorrhage were taken during year and effect of 200mcg misoprostol was analyzed.

**Results:** 100 cases of PPH were included in this study whether they were delivered vaginally or by C. Section. Post Partum Hemorrhage is most commonly seen in late reproduction age group and with high parity 83%. Patients belong to prolonged duration of labour. 58% of normal vaginal deliveries went into uterine atony 27% being to mild bleeding 58% developed moderate bleeding and 15% of severe bleeding 52% of mild bleeding and 36% patient of moderate bleeding showed best results of Misoprostol 200mcg without side effect. Only 12% of severe bleeding achieved good results by giving Misoprostol.

**Conclusion:** Prevention of Post Partum Hemorrhage by giving awareness about this serious entity and Magnitude of reduction in amount of bleeding in our trial suggest the use of Misoprostol. It needs no i/v access and stability at high temperature.

**Keywords:** Post Partum Hemorrhage, Prostaglandins PGE1

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## INTRODUCTION

Obstetrical Hemorrhage APH and Post Partum Hemorrhage stands prominent among the common causes of maternal mortality in developing as well as developed countries. There are 600,000 maternal deaths reported worldwide as well as in Pakistan<sup>(1,2)</sup> Amount of blood loss intern depends on transportation of patient to hospital and time takes management to be started. Various causes include uterine atony (75-90%) retained placenta, and abnormal placentation, uterine inversion lower genital tract laceration, rupture uterine<sup>3</sup>.

Post Partum Hemorrhage is defined Blood loss greater than 500ml within first 24 hours after delivery and when this loss is greater than 1000ml it is sign of gravity<sup>(4)</sup>. Prostaglandins and oxytocins correct uterine atony and appropriate surgical intervention is required for traumatic bleeding<sup>5</sup>. PGE1 was first used in obstetrics in 1993 by Sanches Ramos for labour induction, since then it has been used for different indications like control of Post Partum Hemorrhage and in 3<sup>rd</sup> stage of labour<sup>6,7</sup>. Misoprostal has strong uterotonic effects. It can be given orally. It is inexpensive and does not need refrigeration for storage, but here certain untoward effect like HTN,

abdominal cramps anaphylectic reactions and occasionally bronchospasm<sup>8</sup>. The practical use of misoprostol is in vogue but no proper studies have been conducted to determine the safety and efficacy in our population. Keeping in view this study is designed to determine the effect of one tablet misoprostol (PGE1) 200mcg in the treatment of Post Partum Hemorrhage where oxytocin fails.

## PATIENTS AND METHODS

This descriptive study was carried out in Nishtar Labour Room in our year. All patients belonged to low socioeconomic group who cannot afford the expenses of hospital poor knowledge problem and about clinical morbidity. Each and every patient was dealt by taking complete history and clinical examination included the assessment of blood loss by subjective method Mild 500ml (1 fist) moderate 1000ml and severe > 1000ml Injection Syntocinon 10 units i/v stat given. Bleeding assessed for 15 minutes when bleeding not settled tablet Misoprostol 200mcg given per rectally and bleeding assessed after half an hour. Patients were kept in labour room under observation. Statistical analysis was performed by using SPSS 10 to find out percentage.

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## RESULTS

One hundred patients of Post Partum Hemorrhage (due to uterine atony) were included in this study whether they were delivered vaginally or by C. Section. Post Partum Hemorrhage seen commonly in late reproductive age group. Mean maternal age group in our study was 25.2 years 30% of patients in the study were in the age group of 36-40 years. Next common group was 31 – 35 (28%, 23%) belong to age group which is less than 36 years (Table-I). (Table-I also shows the parity wise Post Partum Hemorrhage) 10% patients were of low parity 30% of medium and 60% were belonging high parity 83% patients belong to the group in which duration of labour was (13 – 20 hours) and 17% of patients belong to group in which labour was just for 8 – 12 hours. Out of 100 patients 58% delivered vaginally and 42% developed uterine atony after C. Section. Patients delivered at home were 38% and 62% delivered in hospital. 78% were un-booked and 22% were booked cases (Table-II). In this study the amount of blood loss was assessed subjectively 1 fist (clotted blood 500ml). 27% patients belonged to group of Mild (5) bleeding 58% of the patients developed moderate bleeding and 15% of serum bleeding (Table-III).

Effects of Misoprostol were better when given per rectally after failure of Syntocinon in 52% patients with mild bleeding 36% patients of moderate bleeding showed best effects of misoprostol 200mcg without any side effects, only 12% patients of severe bleeding achieved good results by giving misoprostol (Table-IV).

Table I:

Age	=n	%age
20 – 25 years	19	19
26 – 30 years	23	23
31 – 35 years	28	28
36 – 40 years	30	30

Parity	=n	%age
Low parity 1-Birth	10	10
Medium 2-4 Birth	30	30
High Parity 50 above	60	60

Duration of Labour	=n	%age
8 – 12 Hours	17	17%
13 – 20 Hours	83	83%

Tablet II

Mode of delivery	=n	%age
Vaginal	58	58
C. Section	42	42

Place of delivery	=n	%age
Home delivery	38	38
Hospital (vaginal, C. Section)	62	62

Status	=n	%age
Booked	22	22
Un booked	78	78

Table III: Blood loss

Amount of blood loss	=n	%age
Patients with mild bleeding 500ml	27	27
Patients with moderate bleeding 500– 1000ml	58	58
Patients with severe bleeding >1000ml	15	15

Table IV: Effects of misoprostol 200mcg after failure of syntocinon

Type of Bleeding	=n	%age
Patient with mild bleeding	52	52
Patients with moderate bleeding	36	36
Patients with severe bleeding	12	12

## DISCUSSION

Obstetrical Hemorrhage stands prominent among the most important cases of maternal morbidity. Many more women who survive and suffer serious illness as a result not only from the effects of anemia but also from the intervention which is necessary as General Anesthesia, Manual removal of placenta and blood transfusion. Reducing the likelihood of Postpartum Hemorrhage by active management of third stage of labour could play an important part in reducing morbidity and mortality<sup>10</sup>.

The two most widely used oxytocins and Syntometrine but Misoprostol is used as potent uterotonic agent recently studied outside United States in the management of 3<sup>rd</sup> stage of labour<sup>11,12</sup>. We choose 500ml of blood loss in the cases of mild bleeding and for moderate bleeding (500 – 1000ml) and for severe bleeding > 1000ml is taken, this all is done. Subjectively there are no criteria for measurement of blood loss.

In our study effects of one tablet 200mcg misoprostol were checked after failure of syntocinon, and we found misoprostol is equally effective in cases of mild to moderate bleeding without any side effects. This is comparable with a study done by Shapen and Richow<sup>13</sup> done in 2001. In which the best results were observed on patients of Post Partum Hemorrhage due to uterine atony after syntocinon failure and hemorrhage ceased in less than 5 minutes without any side effects. No special criteria for measurement of blood loss was done and no investigations were done to see the fall in the hemoglobin levels same as in our present study.

Present study is also comparable with the study of Diab et al<sup>14</sup>. In which no special criteria was taken for diagnosis and no estimation of hemoglobin was done for the amount of blood loss. Only subjective assessment was helpful.

Our study is also comparable with the study of O'Brien which was done in 1998 in which rectal administration of misoprostol gave desirable effects in patients of Post Partum Hemorrhage unresponsive to the conventional therapy but same as in our study no control group was included for comparison<sup>15</sup>.

Misoprostol is safely being used P/R after Syntocinon failure on the patients of Post Partum Hemorrhage due to uterine atony and it showed best results in the cases of delivery induced hemorrhage as it was seen in the study of Shojia and Piechow 2001<sup>16</sup>.

This study was done in France Army Hospital. In this study No. of patients was only 5 and all achieve best (results). This study is comparable with our study in that manner 88% of our patients achieved better results, but common in both studies is that there was no special criteria to choose blood loss.

In Caliskan and Wally study one side effects of misoprostol were noted in the large number of patients such as Hypertension and Shivering because of usage of large doses of misoprostol (400 – 600mcg) but in our study dose of misoprostol was 200mcg given safely and no side effect were observed<sup>17</sup>. One of the advantages of misoprostol is that it does not need i/v access.

In the end this study contributes to the debate and showing that misoprostol can be safely administered per rectally and is probably drug of choice is those areas where the drug delivery is hampered by storage and parental administration is a problem.

## CONCLUSION

In Pakistan maternal deaths continues to be distressing situation. Obstetric hemorrhage eclampsia, puerperal sepsis are leading causes and largely related to quality of life and medical care. Multan in many ways is facing lot of socioeconomic and nutritional problems for its ever increasing population. It is still a burgeoning city of Pakistan. Following conclusion is drawn from this study.

Prevention of post partum hemorrhage is more important which should be done by giving the awareness about this serious entity and good antenatal care and early booking of cases, training of TBAs Magnitude of reduction in the amount of blood loss revealed in our trial suggest the use of misoprostol and misoprostol can be used as effective and safe, strong uterotonic with several advantages included no need of i/v route and stability at high temperature and it can be used in those areas where storage is the problem.

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