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PROPHYLACTIC USAGE OF OXYTOCIN (SYNTOCINON) VS OXYTOCIN PLUS ERGOMETRINE (SYNTOMETRINE) FOR POST-PARTUM HAEMORRHAGE PREVENTION

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Abstract:
Aim: *To evaluate the effect of injection syntocinon in comparison with injection syntometry in reducing the risk of postpartum hemorrhage and to observe side effects after using two drugs.*
Study design: *A case control study.*
Setting and duration: *In the Obstetrics and Gynecology department of Nishter Hospital Multan for one year duration from February 2019 to February 2020.*
Methodology: *Three hundred patients were selected based on convenient sampling with no probability. This study was conducted on patients admitted to the delivery room with a single pregnancy, in whom vaginal delivery was close, patients were divided into three categories. Group I consisted of 150 patients who received only syntocinone in the form of a 5 unit I / V injection. Group II consisted of 150 patients who received a 5 unit syntocinon injection and a 0.5 mg ergometrine injection. I / M injection was given after a placental explosion. Blood loss during labor was estimated by measuring the number of blood clots and weighing towels and cotton balls soaked before, and postpartum delayed hemorrhage was noted within the first 24 hours after delivery. Maternal blood pressure was measured immediately after delivery. Side effects such as nausea, vomiting and headaches have been reported 1 to 2 hours after delivery.*
Results: *The rate of 46.7% blood loss 500 ml in the syntocinone group was observed to be significantly high compared to the tbe frequency of 36.7% syntometine in PC 0.05, the rate of adverse effects in group I syntocinon was 8% and 17.3% in group group II syntometry. The data revealed a significantly high rate (Z = 2.39 p = 0.008) of adverse effects in the group of patients with syntometin and then in the group with syntocinon at PC 0.05.*
Conclusion: *oxytocin alone is as effective as using syntometry to prevent postpartum hemorrhage, but is associated with significantly less maternal side effects.*
KEYWORDS: *Syntocinon, Syntometrine, Postpartum Harmorrhage, Prevention, Delivery.*

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INTRODUCTION:

Postpartum bleeding (PPH) continues to make a significant contribution to maternal morbidity and mortality. Main PPH. This is one of the five main causes of material mortality in both developed and developing countries. PPH accounts for 28% of maternal deaths in developing countries or around 125,000 women a year. It is said that primary HPP occurs after 5% of all births. PPH shows over 500m1 of excessive bleeding during vaginal deliveries. Blood loss in the first 24 hours after delivery is early PPH, blood loss between 24 hours and 6 weeks after delivery is late PPH. The most common cause of PPH is uterine atony (75–90%). Other causes include underlined placenta, lower genital injury, coagulopathy, uterine inversion and uterine rupture. PPH can be largely prevented, proper assessment and treatment is needed. PPH management is best defined in terms of expectations and prevention. This includes identifying women at risk of uterine atony or a primary history of PPH, active third stage labor therapy and routine oxytoxic use during third stage of labor. High-risk patients require appropriate prenatal advice with a full description of the protective measure used. This includes cross blood, which provides access to circulation by inserting an intravenous (I / V) cannula and prophylactic use of oxytocin.

Drugs used to prevent PPH are oxytocin and ergometrin, administered alone or in combination after placental administration. Oxytocin produces rhythmic contractions of the uterus that increase regression, and its effect is noticeable about 3 minutes after intramuscular (I / M) injection. Intravenous injection of 5 oxytocin units causes effective contractions for about 15 minutes. The injection of I / M ergometrine will cause a longer contraction when reversing. There is no room for prophylactic use of ergot alkaloids. Prophylactic use of the drug oxytocin is now well established, but there are still differences in the technique of application and choice of drug. There are strong, favorable recommendations for oxytocin regarding PPH compared to symptoms or ergometrine. Prophylactic administration of oxytocin alone is as effective as the use of oxytocin and ergometrine in the prevention of PPH, but is associated with a lower frequency of side effects. In our population, not enough research has been conducted to determine the safety and efficacy of oxytocin alone. Given the importance of this topic. The study aims to summarize the role of cytokinone in the third stage of labor in preventing PPH.

METHOD:

This study was held in Obstetrics and Gynecology department of Nishter Hospital Multan for one year duration from February 2019 to February 2020. This case follow-up study was conducted on patients admitted to the delivery room with pregnancy because of the signature, in whom vaginal delivery was approaching. Information on age, gestational age, parity, past PPH history, hypertension, diabetes and cesarean section was recorded through structured results. Patients with concomitant diseases such as heart disease, hypertension, preeclampsia and eclampsia or twin women, polyhydraminos and antenatal hemorrhage have been excluded from this disease. Patients with prior history of PPH or cesarean section were also excluded. If the delivery has been extended for any reason i.e. more than 10 hours at Multigravida or more than 18 hours at Primigravida. These patients were excluded from the study. The women were divided into two groups, in group I there were 150 patients who received syntocinon injection in the form of 5 I / V units alone, and in group II - 150 patients. Who received an injection of 5 units syntocinon and an injection of ergometrine 0.5 mg I / M. after admission a general / systemic examination was performed along with an examination of the abdomen and vagina.

The towels and swabs that were used for delivery were pre-weighed and the delivery was carried out on Macintosh sheets, not on the towel. Injection syntocinon or synthometrine was administered after delivery of the placenta. All delayed bleeding was recorded during the first 24 hours after delivery. Maternal blood pressure was measured immediately after delivery and repeated after 30 minutes. The duration of the first, second and third stage of labor was recorded. Patients were kept in the delivery room under observation for 1 hour, and then the patient was transferred to the observation room for 4 hours during this period in which symptoms such as nausea, vomiting and headache were noted.

Statistical analysis was performed using the SPSS version, including the difference between the two groups was assessed using a chi-square test to compare postpartum hemorrhage and the z-test for the drug adverse reaction index.

RESULTS:

One hundred patients were employed for the comparative analytical study, of which 150 (group I) received syntocinone injection and the remaining 159 (group II) received injection from the syntometin group in two hypothetical phases.

The average age in group I was observed 27.49 ± 6.58 (in the range from 17 to 43) years, while in group II 27.17 ± 6.27 (in the range from 16 to 47) years were observed.

The study observed the parity status that 91/300 (30.3%) of women turned out to be primigravidas, and 209/300 (69.7%) was multigravida. The number

of women who were Primigravida in group I was 44/1 50 (29.3%) and 47/1 50 (31.1%) in group II. Blood loss was read in 3 assessments: 300 ml, 500 ml and> 7500 ml. The rate of blood loss above 500 ml was 4.3%, with 4.7% compared to 4% in group II. Thus, a negligible difference in blood loss> 500 ml was observed in both groups at P <0.05. The rate of blood loss 300 ml in group I was 48.7% and 59.3% in group II, which was significantly different p <0.05. The rate of 46.7% blood loss 500 ml in group I was observed significantly higher compared to the rate of 36.7% group I at p <0.05. (Table I).
An adverse reaction was seen in all 38 (25.33%) patients after treatment. The rate of adverse reactions in group I was 8% and 17.3% in group II. The data revealed a significantly high frequency of adverse reactions in the group receiving syntometin IV than in the group receiving syntocinone. Nausea was the most commonly observed adverse reaction. This was found in 17 of 300 patients (5.67%), of which 5 (3.7%) were in group I and 12 (8%) in group II.

Headach occurred in 14 out of 300 patients (4.67%) in 5 out of 150 (3.9%) group I cases and 9 out of 150 (6%) group II cases. Four (1.33%) patients had vomiting. This was seen in 1 (0.7) patient out of 150 in group I.

A transient increase in blood pressure was found only in 2 patients in Group II, while only one point in Group I had a transient decrease in blood pressure. No statistically significant difference was observed in the presence of a specific adverse reaction in both groups at P <0.05 (Table II).

Table I. Amount of blood loss

Amount of Blood loss in mi's	Groups		Significance
	Group A (Syntocinon) n=150	Group B (Syntometrine) n=150	
300 ml	73	89	Z = 1.74
500 ml	48.7%	59.3%	P < 0.04*
> 500 ml	70	55	Z = 1.76
	46.7%	36.7%	P < 0.03
	7	6	Z = 1.74
	4.7%	4.0%	P < 0.40

Table II. Comparison of adverse effect associated with drug group

Adverse effects	Groups		Significance
	Group A (Syntocinon) n=150	Group B (Syntometrine) n=150	
Nausea	5	12	
	3.7%	8.0%	X^2 = 3.06
Headache	5	9	X^2 = 1.20
	3.3%	6.0%	X^2 = 1.01
Vomiting	1	3	P < 0.31
	0.7%	2.0%	X^2 = 2.01
Transient rise in Blood Pressure	0	2	P < 0.16
	0%	1.3%	X^2 = 1.00
Transient fall in Blood Pressure	1	0	P < 0.30
	0.7%	0%	

DISCUSSION:

Maternal mortality is mainly due to the complications of the third stage of labor, especially postpartum hemorrhage. Almost all maternal death (99%) occurs in developing countries, where other factors may contribute to death in the presence of severe PPH, blood loss was the primary endpoint assessed in this study. The threshold above which the PPH diagnosis will be recorded has been set at 500 ml. It was a standard hospital protocol and is accepted worldwide. This study was a randomized study comparing oxytocin I / V (5 units) with the intramuscular delivery stage. A prospective cohort study found that oxytocin I / V is as effective as I / M syntornetrin in preventing postpartum hemorrhage, but is associated with a much higher percentage of unpleasant maternal side effects such as nausea, vomiting, headache, and increased blood pressure.

The result of our study confirmed the effectiveness of oxytocin IJV in preventing PPH with a lower risk of hypertension. Better I / V prophylaxis over I / M oxytocin is likely to be associated with the early onset of I / V administration, as Soriano suggests, early uterine delivery is associated with a lower risk of PPH. The benefits of oxytocin synthesis should not be undermined by a rigid approach to the route of administration. Undesirable side effect in the mother, well known for the use of syntometrine, and the incidence in Western studies was as much as 20-30% in this study, the use of syntometry was associated with a significant increase in the risk of nausea 8.0%, vomiting 2.0%, headache 6 , 0%, a high rate of side effects associated with the use of the syntometer, as observed in the current study, was well recognized by Nieminen16 and Dumoulin.17 Other maternal adverse effects such as pulmonary edema, fluid retention were not observed in the present study. This study only contributes to this debate to the extent that it shows that oxytocin can be safely administered intravenously, probably the drug of choice.

CONCLUSION:

In conclusion, there is no significant clinical difference in the effectiveness of intramuscular syntometry and intravenous oxytocin in preventing postpartum blood loss. The amount of PPH reduction revealed in our study suggests the use of oxytocin Because oxytocin alone is as effective as using syntometrine to prevent PPH, but is associated with significantly less maternal side effects, it is concluded that oxytocin can be used prophylactically to prevent
PPH Contacts.

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