

Effect of Prolonged Duration of Third Stage Labour on Risk of Hemorrhage.

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ABSTRACT

Background: In women at low risk of PPH, recent studies have suggested that active pharmacological management does not reduce blood loss when compared with physiological management and routine use of oxytocic drugs benefits only seven women per hundred. The aim of study is to study the effect of prolonged duration of third stage labour on risk of hemorrhage **Methods:** This was a hospital based prospective randomized controlled trial study. Institutional Ethics Committee permission was obtained. Informed consent was taken from each and every woman who participated in the study. A total of 500 women in third stage of labour were divided into two groups of 250 each. The outcome was measured in terms of blood loss and hemoglobin percentage. **Results:** It is observed that the duration of III stage labour was more among control group where the cord was clamped compared to study group where the cord was drained. Similarly it was also observed that the blood loss was also more among control group compared to study group, both in multigravida and primigravida. It is seen that there was a fall of 1.1% of hemoglobin in primigravida in study group compared to 1% among control group in primigravida. Similar result was seen for multigravida women. **Conclusion:** Routine drug administration is unnecessary for all low risk women.

Keywords: Hemorrhage, Multigravida, Primigravida.

INTRODUCTION

Post partum hemorrhage (PPH) is sudden unpredictable, dramatic and catastrophic. It can kill a woman in two hours. Routine management of third stage labour may reduce the likelihood of hemorrhage, which would improve the overall mortality and morbidity. In 1988, Prendiville et al^[1] showed that a policy of active management of third stage of labour was justified, but today routine drug administration with out specific indication is being challenged.

In women at low risk of PPH, recent studies have suggested that active pharmacological management does not reduce blood loss when compared with physiological management and routine use of oxytocic drugs benefits only seven women per hundred.^[2]

The third stage of labor which starts with the delivery of the fetus consists of the two phases of separation and exit of placenta. Defective separation of the placenta leads to the separation of blood sinuses and consequently postpartum hemorrhage (PPH). The prolonged third stage of labor is considered as the most important factor of PPH and excessive bleeding; therefore, different time intervals are set to diagnose the abnormal state of placenta and the possibility of PPH. PPH is a leading cause of maternal morbidity and mortality.

More than 99% of maternal deaths occur in poor countries, while 30% of these deaths are attributed to the excessive blood loss commonly known as PPH. The common cause of delayed placenta delivery can be attributed to postpartum hemorrhage, inadequate uterine contraction, chorioamnionitis, and abnormal placenta attachment such as placenta increta and succenturiate lobe.^[3]

Hence present study was planned to study the effect of prolonged duration of third stage labour on risk of hemorrhage.

MATERIALS AND METHODS

This was a hospital based prospective randomized controlled trial study. Institutional Ethics Committee permission was obtained. Informed consent was taken from each and every woman who participated in the study.

This study involved a total of 500 women who satisfied the inclusion and exclusion criteria. Women who presented in spontaneous labour after 37 weeks (confirmed with USG) of amenorrhea, uncomplicated primigravida and multigravida, age between 18–30 years, with vertex presentation were included in the study. But those with previous history of PPH, and antepartum hemorrhage, past history of cesarean section, fever, pregnancy induced hypertension, Malpresentation, intra uterine death, uterine malformations were excluded from the study.

They were divided into study and control groups. The study group had 250 women in whom the cord was drained. The control group had 250 women in whom the cord was clamped.

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A detailed history, general examination and obstetric examination was done for all patients. Duration of labour was noted. The risk of hemorrhage was assessed in terms of hemoglobin percentage. The data was analyzed using proportions.

RESULTS

The present study was carried out to assess the effect of prolonged duration of third stage labour

Table 1: Mean duration of III stage labour and blood loss

Type of group	Primigravida		Multigravida	
	Duration of III stage labour (minutes)	Blood loss in ml	Duration of III stage labour (minutes)	Blood loss in ml
Study group	2.35	159.75	1.94	115.47
Control group	5.84	214.39	3.58	198.91

Table 2: Mean hemoglobin percentage at admission and 2 days after delivery

Type of group	Primigravida		Multigravida	
	Hb % at admission	Hb % after 2 days	Hb % at admission	Hb % after 2 days
Study group	75	73.9	72.7	71.7
Control group	72.9	71.9	72.9	71.7

Table 2 shows mean hemoglobin percentage at admission and 2 days after delivery among study group and control group in primigravida and multigravida. It is seen that there was a fall of 1.1% of hemoglobin in primigravida in study group compared to 1% among control group in primigravida. Similar result was seen for multigravida women.

DISCUSSION

The purpose of this study was to evaluate the impact of cord drainage in women at low risk of PPH for whom no routine drug administration was planned.

Cord drainage significantly reduced the objective of blood loss and also the manual removal of placenta to some extent. The probability of a drop of hemoglobin greater than 3 gm was higher in primiparous than in multiparous.

Thus any difference in blood loss measurement could only have been because of the difference in delivery management, this is minimized by taking into account of hemoglobin estimation.

Previous studies have shown that 90% of term placentas are delivered spontaneously within 15 minutes and only 2.2% are delivered at 30 minutes with physiological management, 93% women had third stage labour duration of 10 minutes as compared with 95% women with routine oxytocin management.^[1-3]

Although no difference was found between the two groups regarding the clinically defined PPH, cord drainage lowered objectively measured blood loss in the study group.

on risk of hemorrhage. Table 1 shows mean duration of III stage labour and blood loss among primigravida and multigravida. It is observed that the duration of III stage labour was more among control group where the cord was clamped compared to study group where the cord was drained. Similarly it was also observed that the blood loss was also more among control group compared to study group, both in multigravida and primigravida.

Very few studies have looked at the effects of cord drainage on blood loss and these few were controversial.

Botha^[4] showed in a series of 60 women where no oxytocics were given, a statistically increase in blood loss when cord was clamped early compared to no cord clamping.

Thomas et al^[5] undertook a randomized study comparing women who had routine oxytocic management of third stage labour with cord drainage with a group of women without cord drainage. No difference was found either in duration of third stage labour or in the rate of retained placenta or in PPH.

Thilaganathan et al^[6] compared cord drainage as a part of physiological management with oxytocic management of third stage labour and concluded that routine oxytocic treatment carries no more benefits than physiological management.

Elbourne and Harding^[7] hypothesized that physiological management may carry no greater risk than active management in low risk women.

Giacalone et al^[8] undertook a randomized evaluation of two techniques of the management of the third stage of labour in women at low risk of PPH, concluded that cord drainage decreases the duration of third stage of labour and reduces the blood loss but not the incidence of manual removal of the placenta.

Although it can be agreed that routine drug management is unnecessary for low risk women. Present study clearly demonstrated that when no drug is used, cord drainage has more objective benefits than expectant management in terms of biologically defined PPH.

This study demonstrated real advantages of early cord drainage without significantly increasing the

work load of labour staff. This technique should thus be encouraged in the management of third stage labour when no routine drug administration is planned.

CONCLUSION

Routine drug administration is unnecessary for all low risk women.

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