

Do spontaneous separation of placenta reduce blood loss during caesarean delivery?

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Abstract

Background: Blood loss during a caesarean section is of great concern for the surgeon, especially in an anaemic patient and where facilities are not available for blood transfusion especially at the peripheral hospitals. Also majority of our pregnant women (nearly 80%) are anaemic. Again there is a lot of demand for blood transfusion due to non-comparable conditions like APH, PPH etc which may further lessen the availability of blood for transfusion. Such being the situation the technique of bloodless caesarean proves to be a boon in our setup. So also blood transfusion has its own complications. **Objectives:** To compare the blood loss after spontaneous separation of placenta with the blood loss associated with manual removal of placenta during caesarean section deliveries. **Materials and Methods:** In this study, estimation of blood loss in the placental delivery, was done on 100 consecutive women undergoing caesarean section due to various indications excluding those who are likely to bleed by the virtue of their pathology like APH. Of the 100 cases 50 cases were managed by waiting for placental separation, and alternative cases were managed by manual removal of placenta without waiting for spontaneous separation. The blood loss was assessed by using preweighed cotton mops and weighing them again after the use to mop the blood loss. Care was taken to not allow the mixing of amniotic fluid and all the clots were weighed and computed for the loss of blood (by multiplying the weight of the clot by 1.05) **Results:** Shapiro wilks test showed that the data was normally distributed, thus parametric test was employed. There was a statistical significance between the study and control groups for placental delivery interval, blood loss and drop in Hb levels at $p < 0.05$. There was no difference in the morbidity levels in study and control groups as shown by the Chi square test $p (< 0.05)$ **Conclusion:** The spontaneous placental separation and delivery during caesarean section is associated with less blood loss than that of manual removal of placenta.

Keywords: Manual removal of placenta, Blood loss assessment, placental separation, Caesarean section.

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especially at the peripheral hospitals. Also majority of our pregnant women (nearly 80%) are anaemic. Again there is a lot of demand for blood transfusion due to non-comparable conditions like APH, PPH etc, which may further lessen the availability of blood for transfusion. Such being the situation the technique of bloodless caesarean proves to be a boon in our setup. So also blood transfusion has its own complications. Studies of the possible role of technique of placental delivery on blood loss at caesarean delivery have not been reported. There are two main methods for placental delivery during caesarean section. Some experts manually cleave the placenta from the decidua basalis and remove it from the uterus, while others prefer to wait for spontaneous delivery. We should make efforts to minimize the blood loss at the time of caesarean section. When we choose

INTRODUCTION

Blood loss during a caesarean section is of great concern for the surgeon, especially in an anaemic patient and where facilities are not available for blood transfusion

any one of the methods we have to weigh the merits and demerits of both. In the present study we observed both types of placental separation with regard to the blood loss

OBJECTIVES

To compare the blood loss after spontaneous separation of placenta with the blood loss associated with manual removal of placenta during caesarean section deliveries.

MATERIALS AND METHODS

In this study, estimation of blood loss in the placental delivery ,was done on 100 consecutive women undergoing caesarean section due to various indications excluding those who are likely to bleed by the virtue of their pathology like APH .Of the 100 cases 50 cases were managed by waiting for placental separation, and alternative cases were managed by manual removal placenta without waiting for spontaneous separation .The blood loss was assessed by using pre weighed cotton mops and weighing them again after the use to mop the blood. Care was taken not to allow the mixing of amniotic fluid and all the clots were weighed and computed for the loss of blood (by multiplying the weight of the clot by1.05)

RESULTS

Table 1: Normality test

Shapiro-Wilk		
Statistic	df	Sig.
0.963	50	0.119

Shapiro wilks test showed that the data was normally distributed, thus parametric test was employed.

Table 2: Distribution of delivery interval, blood loss and drop in Hb levels

Group		N	Mean	Std. Deviation	Std. Error Mean	P value	95% CI interval
Delivery interval	Manual removal group	50	45.34	5.60	0.79	0.00	-20.53 --13.66
	Spontaneous delivery group	50	62.44	10.89	1.54		-20.55- -13.64
Blood loss	Manual removal group	50	101.04	13.70	1.93	0.00	40.34-50.76
	Spontaneous delivery group	50	58.64	12.54	1.77		40.34 -50.76
Drop in Hb	Manual removal	50	1.61	1.66	0.23	0.00	0.38- 1.32
	Group	50	0.75	.21	0.03		0.37- 1.33

There was a statistical significance between the study and control groups for delivery interval, blood loss and drop in Hb levels at $p < 0.05$.

Table 3: Distribution of Morbidity in study and control groups

Group	Present	Absent	Total
Study group	4	46	50
Control group	2	48	50
Total	6	94	100

Chi square value – 0.709, p value – 0.40

There was no difference in the morbidity levels in study and control groups as shown by the Chi square test $p (< 0.05)$

Inclusion Criteria

- Gestational age of pregnant women should be > 34 wks
- Should be a care of First caesarean section for her
- Her Hb should be > 10 gm % with normal BT and CT.

Exclusion Criteria

- Gestational age of pregnant women less than 34wks.
- Multiple pregnancies.
- Poly hydramnios.
- Placenta praevia.
- Abruptio placenta.
- Pregnancy induced hyper tension, Pre-eclampsia and Eclampsia.
- Premature rupture of membranes.
- Previous caesarean section.
- Pregnancy with Myoma.
- Sever medical surgical complication involving heart, lungs, kidneys or brain.
- Severe anaemia and bleeding disorders.

DISCUSSION

During caesarean section placenta can be delivered by two methods, namely spontaneous placental delivery and manual removal. This study was conducted in department of obstetrics and gynaecology, at teaching hospital attached to J.J.M. Medical College, Davangere namely C G Hospital, Women and Children Hospital and Bapuji Hospital. Hundred women were selected who fulfilled the selection criteria and they were divided in group A and B, 50 each. In this study, 2 methods of placental delivery were compared with regard to perioperative blood loss, haemoglobin deficit, and postoperative complications. In our study, mean perioperative blood loss was found to be 101.04ml +/-13.7ml in study (Manual Removal Of Placenta) group v/s 58.64ml+/-12.54ml in control (spontaneous) delivery group. In our study, mean perioperative Hb% decrease was found to be 1.61 gm% in study group v/s 0.75 gm% in control, spontaneous delivery group. Ajay and Suman A (2009)¹ Compared the blood loss and time consumed between spontaneous delivery and manual removal of placenta in 100 caesarean section cases n=50 for manual removal and n=50 for spontaneous delivery. They measured the operative blood loss directly and found that blood loss during manual removal of placenta was greater than in spontaneous delivery group. Vincenzo Berghella *et al* (2005)² In their study, placental removal options of either spontaneous or manual removal at caesarean delivery have been studied in 6 randomised trials that included >1700 showed that spontaneous delivery of placenta was associated with reduced blood loss and postpartum endometritis as compared to manual removal of placenta. S. Dehbashi *et al* (2004)³ in their study noted that overall endometritis rate as well as blood loss was higher with manual removal of placenta as compared to spontaneous delivery group. Michal Morales *et al* (2004)⁴ concluded that blood loss is less in spontaneous delivery group as compared to manual removal group which is in accordance with our study. Samir Haider *et al* (2004)⁵ reported that mean perioperative blood loss to be significantly greater among

manual removal of placenta group in comparison to spontaneous placental delivery group.

H. Ramadani (2004)⁶ observed that a mean amount of blood loss was higher among manual removal of placenta group as compared to spontaneous delivery group. All these studies were consistent with our study

CONCLUSIONS

Spontaneous Delivery of Placenta during caesarean section is associated with lesser perioperative blood loss, lesser perioperative Hb fall as compared to manual removal of placenta. It is also associated with lesser postoperative febrile morbidity as compared to manual removal of placenta. Based on our study spontaneous delivery of placenta is advocated at the time of caesarean section because reduced blood loss helps in decreasing the postoperative morbidity and improves postoperative recovery.

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