

A STUDY ON THE EFFECT OF PLACENTAL CORD DRAINAGE ON THE DURATION OF THIRD STAGE OF LABOUR AMONG INTRANATAL WOMEN IN A SELECTED HOSPITAL AT MANGALORE

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Abstract :

The study was conducted to assess the effect of placental cord drainage on the duration of third stage of labour among intra natal women. The study design adopted was true experimental approach with two group post-test only research design. The base line clinical Proforma were used to collect the data from the women in control and experimental group. Data obtained in these areas were analysed by descriptive and inferential statistics. The study finding also revealed that there is a significant difference between the duration of 3rd stage of labour among experimental group and control group. & there is no significant association between the duration of third stage of labour and selected demographic variables among experimental group and control group.

Keywords: placental cord drainage, duration of third stage of labour, intra natal women

Introduction :

Labour end with the birth of the baby and delivery of the placenta. The delivery of the placenta is called the third stage of labour. The 3rd stage of labour refers to the interval from delivery of the fetus to the separation and expulsion of the placenta. The major complication associated with this period is postpartum haemorrhage which is the most common cause of maternal morbidity and mortality in developing countries.⁵

Even in developed countries although maternal mortality rates are much lower, postpartum haemorrhage remains major concern. Numerous factors lead to increased incidence of postpartum haemorrhage like prolonged labour, multifetal gestation, large baby, anaemia, eclampsia and operative vaginal delivery. The third stage of labour is generally managed using two different approaches: active and physiological or expectant management.

The active management

involves administration of oxytocic drugs, clamping and cutting the cord as well as controlled cord traction. The physiological or expectant management mainly involves maternal effort assisted by gravity or putting the baby to the breast without using artificial oxytocin or early clamping or controlled cord traction. Cord drainage in 3rd stage of labour involves unclamping the previously clamped and separated umbilical cord and allowing the blood from the placenta to drain freely into appropriate receptacles.⁴

Materials and Methods :

A true group research design was selected in this study. The study was conducted in selected hospital at Mangalore. The sample for the study comprised of 40 labouring women in third stage of labour. the hospital was selected by purposive sampling technique and random allocation was adopted to assign 20 sample to experimental and, 20 sample to control group.

The information regarding the demographic data were collected from the women through the base line clinical proforma. In the experimental group placental cord drainage will be done whereas in the control group the

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placenta is clamped and allowed to deliver without any interventions. The duration of placental delivery will be assessed in both the groups by using a stop watch. Data obtained in these areas were analysed by frequency percentage, Mann-Whitney U Test and fishers exact test.

Results :

The findings are discussed under the following headings

TABLE 1 : DISTRIBUTION OF FREQUENCY PERCENTAGE

n=20+20

Age	Experimental		Control	
	Frequency	Percent	Frequency	Percent
20 - 25 years	11	55.0	8	40
26 - 30 years	9	45.0	10	50
31 - 35 years	0	0.00	2	10
Education				
Primary	4	20.0	5	25.0
High school	7	35.0	4	20.0
Puc	5	25.0	8	40.0
Graduate & above	4	20.0	3	15.0
Religion				
Hindu	7	35.0	7	35.0
Christian	5	25.0	3	15.0
Muslim	8	40.0	10	50.0
Income of the family				
Rs. 5001 - 10000	6	30.0	4	20.0
Above Rs. 10000	14	70.0	16	80.0
Age at marriage				
18 - 20 years	10	50.0	7	35.0
21 - 22 years	5	25.0	6	30.0
23 - 24 years	4	20.0	7	35.0
25 - 26 years	1	5.0	0	0.0
Type of family				
Nuclear	15	75.0	12	60.0
Joint	5	25.0	8	40.0
Parity				
Primipara	14	70.0	12	60.0
Multipara	5	25.0	7	35.0
Grand multipara	1	5.0	1	5.0
Gestational age				
37 - 38 weeks	2	10.0	0	0.0
38 - 39 weeks	16	80.0	17	85.0
40 weeks & above	2	10.0	3	15.0
Duration of married life				
Below 1 year	1	5.0	0	0.0
1 - 3 years	13	65.0	10	50.0
Above 3 years	6	30.0	10	50.0
Number of miscarriage				
Nil	17	85.0	15	75.0
One	3	15.0	3	15.0
Two	0	0.0	2	10.0

Age	Experimental		Control	
	Frequency	Percent	Frequency	Percent
Spontaneous labour				
No	20	100.0	20	100.0
Induction of labour				
With oxytocin	19	95.0	15	75.0
With cerviprime	1	5.0	1	5.0
Arom	0	0.0	4	20.0
Nature of placenta				
Complete	20	100.0	20	100.0
Duration of third stage of labour				
1 - 5 minutes	20.0	100.0	1	5.0
6 - 10 minutes	0	0.0	15	75.0
More than 10 minutes	0	0.0	4	20.0

SECTION 2: COMPARISON OF DURATION OF THIRD STAGE OF LABOUR AMONG EXPERIMENTAL AND CONTROL GROUP

Table 2 : comparison of duration of third stage of labour among experimental and control group

Mann-Whitney U Test			
	Median	IQR	p - value
Experimental	157.5	75	0.000
Control	460.0	219	P<0.05 Significant

P-value=0.000

Level of significance ($p < 0.05$), the p value is less than 0.05 hence the research hypothesis is accepted and it is interpreted that there is a significant difference between the duration of 3rd stage of labour among experimental group and control group..

SECTION 3: ASSOCIATION BETWEEN DURATION OF THIRD STAGE OF LABOUR AND SELECTED VARIABLES

Table 3 : Association between duration of third stage of labour and selected variables

Variables	Duration of third stage of labour			P -value
Age in years	1-5 minutes	6-10 minutes	More than 10 minutes	
20-25 Years	12	6	1	0.380
26-30 Years	9	7	3	
31-35 Years	0	2	0	
Education				
Primary	7	4	1	0.904
High school	7	4	0	
PUC	6	5	2	
Graduate & above	4	2	1	

Variables	Duration of third stage of labour			P-value
Age in years	1-5 minutes	6-10 minutes	More than 10 minutes	
Religion				
Hindu	8	6	0	0.238
Christian	5	1	2	
Muslim	8	8	2	
Income				
Rs. 5001-10000	7	1	2	0.077
Above 10000	14	14	2	
Age at marriage				
18-20 Years	10	5	2	0.865
21-22 Years	6	4	1	
23-24 Years	4	6	1	
25-26 Years	1	0	0	
Type of family				
Nuclear	16	8	3	0.300
Joint	5	7	1	
Parity				
Primipara	15	8	3	0.840
Multipara	5	6	1	
Grand multipara	1	1	0	
Gestational age				
37-38 Weeks	2	0	0	0.645
38-39 Weeks	17	12	4	
40 Weeks & above	2	3	0	
Duration of married life				
Below 1 Year	1	0	0	0.442
1-3 Year	14	7	2	
Above 3 Year	6	8	2	
No. of miscarriage				
Nil	18	11	3	0.453
One	3	2	1	
Two	1	2	0	
Induction of labour				
With oxytocin	20	11	3	0.112
With cerviprime	1	1	0	
AROM	0	3	0	

The above table shows that as the p value for all the variables is >0.05 (0.380, 0.904, 0.238, 0.077, 0.865, 0.300, 0.840, 0.645, 0.442, 0.453, 0.112) the research hypotheses is rejected and concluded that there is no association between the duration of third stage of labour and selected variables.

Discussion :

In this study the placental cord drainage was found to be effective in reducing the duration of third stage of labour.

The study findings are consistent with the findings of Melal Mohammed AL-Jeborry, Asmaa Kadhin Gatea who had conducted a study to assess the effect of placental cord

drainage on duration of third stage of labour in a selected hospital at Iran. The result concluded that the average duration of 3rd stage of labour was $5.35+2.3$ minutes in study group and $8.9+4.9$ minutes in control group. This difference was highly significant ($p < 0.00$)²

Limitations

- 1 The study was done for 40 samples. Hence generalization is possible only for selected samples.
- 1 The study was limited to only those who were willing to participate in the study.

Recommendations :

- 1 A similar study can be conducted in larger sample.
- 1 Placental cord drainage should be encouraged for management of 3rd stage of labour when no routine drug administration is planned because it is safe noninvasive and not requiring any effort, cost or equipments and this is relevant in rural areas.
- 1 A comparative study can also be done between the effectiveness of various measures for management of third stage of labour.

Conclusion :

In this study the placental cord drainage was found to be effective in reducing the duration of third stage of labour. The study findings showed that, there is a significant difference between the duration of 3rd stage of labour among experimental group and control group. Hence it was concluded that Placental blood drainage is a simple safe and non-invasive method which reduces the duration of third stage of labour.

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