



Obstetrical Nursing

A STUDY TO EVALUATE THE EFFECTIVENESS OF EXPECTANT MANAGEMENT WITH UTEROTONICS DURING THE THIRD STAGE OF LABOUR FOR THE DELIVERY OF PLACENTA IN TERMS OF SELECTED PHYSIOLOGICAL PARAMETERS, OUTCOME AND ANXIETY IN THE PARTURIENTS IN THE LABOUR ROOM OF THE SELECTED HOSPITAL IN DELHI.

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ABSTRACT The objectives of the experimental study to assess and evaluate effectiveness of expectant management with uterotonics in the parturient in terms of physiological parameters, outcome & anxiety. An experimental research approach was used with Pre-test post-test control group design. The population comprised of parturient during the third stage of labour at selected hospital of Delhi. There was significant mean difference in pulse, systolic blood pressure and diastolic blood pressure of parturient during third stage of labour. The data revealed that the mean difference in blood loss were found statistically significant. There was a significant relationship between the blood loss and outcome and were no significant relation between the physiological parameters, outcome, anxiety level of parturient during the third stage of labour.

KEYWORDS : Parturient, Expectant management, Selected Physiological Parameters, Outcome, Anxiety

Management of placenta in parturient during the third stage of labour has been a subject of investigation in the worldwide. Expectant management with uterotonic is a management in which Uterotonic medication (Oxytocin) administered; umbilical cord not cut or clamped after 1 min; separation of the placenta without intervention; and placenta delivered by gravity or spontaneously by maternal expulsion which will help in reducing the complications in mother during the third stage of labour.

Objectives of the experimental study were to evaluate the effectiveness of expectant management with uterotonics in terms of selected physiological parameter (pulse rate, blood pressure, blood loss) outcome & anxiety, to find out the relationship between the selected physiological parameters & outcome, selected physiological parameters & level of anxiety, Outcome & level of anxiety in the parturients in the labour room of the selected hospital in Delhi.

Sample comprises of the 60 Parturient during the third stage of labour selected through purposive sampling through random assignment in the Safdarjung Hospital, New Delhi. Total 6 observations were taken at the interval of 30 minutes based on pre-test post test control group design during the third stage of labour.

Ethical clearance was taken from the Safdarjung hospital ethical committee. Data collection was done by Observational checklist on outcome, structured performa, Digital Sphygmomanometer, Measuring Glass, C.D. Spielberger's State Trait Anxiety Inventory (STAI) Scale in the month of December and January i.e. 20/12/14-10/1/15 in labour room of Safdarjung Hospital.

Results:-

1. Findings related to the physiological parameters in parturient in terms of pulse rate in experimental group and control group

- The mean difference of pre-test and post-test scores ("F" value =

4042.4) in pulse were found statistically significant at the 0.05 level. Hence expectant management with uterotonics was effective.

- The data revealed that the mean difference of post test scores("F" value = 5637.3) of experimental and control group in terms of pulse of the parturient were found statistically significant at the 0.05 level.

2. Findings related to physiological parameters in parturient in terms of blood pressure in experimental and control group in parturient

- The mean difference of pre-test and post-test scores ("F" value= 31529.9) in systolic blood pressure were found statistically significant at the 0.05 level.
- The data revealed that the mean difference of post test scores("F" value = 41135.3) of experimental and control group in terms of systolic blood pressure of the parturient were found statistically significant at the 0.05 level. Hence expectant management with uterotonics was effective.
- The mean difference of pre-test and post-test scores in ("F" value= 23444.1) in diastolic blood pressure were found statistically significant at the 0.05 level.
- The data revealed that the mean difference of post test scores("F" value = 21651.4) of experimental and control group in terms of diastolic blood pressure of the parturient were found statistically significant at the 0.05 level. Hence expectant management with uterotonics was effective.

3. Findings related to physiological parameters in parturient in terms of blood loss in experimental and control group in parturient

- The mean difference of post-test scores in blood loss ("F" value= 117.43) of experimental group parturient during third stage of labour were found statistically significant at the 0.05 level.

TABLE-1

Repeated measures analysis of variance (ANOVA) on post test Mean, standard deviation, of changes in outcome i.e. blood loss in the parturient at different time in experimental group and control group

Outcome	Group	0 hr	30 min	60 min	90 min	120 min	M _d	'F' value	df	P
		Mean Standard deviation	Mean Standard deviation	Mean Standard deviation	Mean Standard deviation	Mean Standard deviation				
Blood loss	Experimental	56.0±20.4	5.8±1.9	5.0±.00	5.0±.00	5.0±.00	219.3	116.7	58	00*
	Control	275.3±185.4	11.8±5.5	6.2±2.2	5.2±0.9	5.0±.00				

Significant level at .05 level, Table value df-(58,4)=2.52

- The data presented in the Table 1 shows that the mean blood loss of the parturient at before delivery of placenta, 0hr, 30 min, 60

min, 90 min, 120 min of intervention. The data revealed that the mean difference of post-test scores ("F" value=219.3) in blood loss were found statistically significant at the 0.05 level.

4. Findings related to the outcome of parturient in experimental group and control group.

- The mean difference 0.20 in outcome was found statistically not significant at the 0.05 level. The data revealed that the 't' value of the observational checklist was .95 which was found to be the statistically not significant at 0.05 level.

5. Findings related to level of anxiety in the parturient in experimental group

- The obtained mean difference of level of anxiety (2.1) between mean pre-test and post test scores of experimental group were found to be statistically not significant at 0.05 level.
- The mean difference of level of anxiety (2.7) between mean post test scores of experimental group and control group were found to be statistically not significant at 0.05 level.

6. Findings related to the correlation between physiological parameters, outcome, and level of anxiety

- There was a low negative non- significant Correlation between post-test physiological parameter(Pulse) and outcome score in experimental group at 0.05 level of significance with the r value (-0.02). There was a low positive non- significant correlation between post- test physiological parameter(systolic blood pressure) and outcome score in experimental group at 0.05 level of significance with the r value (0.26). There was a low positive non-significant correlation between post- test physiological parameter(diastolic blood pressure) and outcome score in experimental group at 0.05 level of significance as the r value (0.23) .There was a positive significant correlation between post-test physiological parameter(Blood loss) and outcome score in experimental group at 0.05 level of significance with the r value (0.47).

TABLE -2

Mean, Standard deviation and Karl Pearson Coefficient of Correlation between post scores of selected physiological parameters (blood loss) and outcome of parturient in experimental group

N-30

Group	Variables	Mean	SD	'r' Value
Experimental group	Physiological parameters (Blood loss)	76.8	21.4	0.47
	Outcome	10.6	.50	

r(28)=0.36 at 0.05 level of significance (p<0.05)

The data presented in the Table 2 shows that there was positive significant correlation between post- test physiological parameter (Blood loss) and outcome score in experimental group at 0.05 level of significance as the r value (0.47) was obtained was less than the tabulated value.

No significant relationship was found between physical parameters and level of anxiety score.

Conclusion :- It can be concluded that expectant management for the delivery of placenta was found to be effective as resultant in less blood loss and other complications too. Uterotonics plays a very significant role in the management of third stage of labour, efforts should focus on the uterotonic (primarily oxytocin) to reduce post-partum haemorrhage. Controlled cord traction method helps in shortening of third stage of labour. The findings of the present study are conformity of with the findings of Deepak NN et al (2013) that practicing active management of third stage of labour requires higher level of training and skill particularly controlled cord traction if practiced in a wrong way can lead to separation of cord from placenta and uterine inversion.

REFERENCES

BOOKS

- Auven S. et al. Comprehensive Maternity Nursing. 3rd ed. Philadelphia: Lippincott Company Pvt. Ltd; 1992
- Daftary, N.S., and Chakravarti, S. Manual of Obstetrics 2nd ed. Elsevier Pvt. Ltd; 2005
- Dawn, C.S. Textbook of Obstetrics and Neonatology. Calcutta: New Central Book Agency Pvt. Ltd; 2005.
- Garret, H.E. Statistics in Psychology and Education 1st ed. New Delhi: Paragon International Publishers; 2009.
- Myles, M.F. Textbook For Midwives 8th ed. Edinberg: Churchill Livingston; 1975
- Nelson, and May. Comprehensive Maternity Nursing. Philadelphia: J. B. Lippincott Company; 1989.
- Polit D.F and Beck, C.T. Nursing Research - Creating and Assessing Evidence for Nursing Practice. 8th ed., USA: Wolters Kluwer/ Lippincott Williams and Wilkins; 2010.

- Shalan, S. Textbook of Obstetrics. 1sted. New Delhi: JaypeeBrothers Medical Publishers. Pvt. Ltd; 2007.

JOURNALS

- Abdel-Aleem H, Singata M, Abdel-Aleem M, Mshwshwe N, Williams X, Hofmeyr GJ. Uterine massage to reduce postpartum hemorrhage after vaginal delivery. International Journal of Gynecology and Obstetrics. 2010;111(1):32-6.
- Abouzaher C. Antepartum and postpartum haemorrhage. Murray CJL, Lopez AD, editors. Health Dimensions of Sex and Reproduction. Harvard University Press; Boston: 1998. pp. 172-4.
- Bais J, Eskes M, Pel M, Bonsel G, Bleker O. Postpartum hemorrhage in nulliparous women: incidence and risk factors in low and high risk women. European Journal of Obstetrics and Gynaecology and Reproductive Biology. 2004;115(2):166-72.
- Blackburn S. Physiological third stage of labour and birth at home. In: Edwins J, editor. Community Midwifery Practice. Blackwell Publishing; Oxford: 2008.
- Bloomfield TH, Gordon H. Reaction to blood loss at delivery. Journal of Obstetrics and Gynaecology. 1990;10(Suppl 2):S13-S16.
- Bonnar J, McNicol GP, Douglas AS. Coagulation and fibrinolysis mechanisms during and after normal childbirth. British Medical Journal. 1970;2(103):200-3
- Buckley SJ. Undisturbed birth - nature's hormone blueprint for safety, ease and ecstasy. MIDIRS Midwifery Digest. 2004;14(2):203-9.
- Clinical Practice Obstetrics Committee. Active management of the third stage of labour: prevention and treatment of postpartum hemorrhage: No. 235 October 2009 International Journal of Gynecology and Obstetrics 2010; 108: 258-267
- Elbourne D. Care in the third stage of labour. In: Robinson S, Thomson AM, editors. Midwives, Research and Childbirth. Vol. 4. Chapman and Hall; London: 1995. pp. 192-207.
- Farrar D, Airey R, Tuffnell D, Duley L. Care during the third stage of labour: a postal survey of obstetricians and midwives. Archives of Disease in Childhood. Fetal and Neonatal Edition. 2009;94:40
- Fry J. Physiological third stage of labour: support it or lose it. British Journal of Midwifery. 2007;15(11):693-5.
- Gülmezoglu AM, Widmer M, Merialdi M, Qureshi Z, Piaggio G, Elbourne D, et al. Active management of the third stage of labour without controlled cord traction: a randomized non-inferiority controlled trial. Reproductive Health. 2009;6:2. DOI: 10.1186/1742-4755-6-2.
- Gyte GM. Evaluation of the meta-analyses on the effects, on both mother and baby, of the various components of 'active' management of the third stage of labour. Midwifery. 1994;10(4):183-99.
- Gyte G. The third stage of labour. Part 2: active management of third stage. National Childbirth Trust New Digest. 2006;36:22-8.
- Harris T. Care in the third stage of labour. In: Henderson C, MacDonald S, editors. Mayes Midwifery. Edinburgh; 2004. pp. 507-23.
- Herman A, Zimerman A, Arieli S, Tovbin Y, Bezer M, Bukovsky I, et al. Down-up sequential separation of the placenta. Ultrasound in Obstetrics and Gynecology. 2002;19:278-81.
- Hyttén F. The physiology of the puerperium. In: Chamberlain G, Steer P, editors. Turnbull's Obstetrics. 3rd Edition Churchill Livingstone; Edinburgh: 2001. pp. 635-46.
- Jangsten E, Mattsson LA, Lyckestam I, Hellstrom AL, Berg M. A comparison of active management and expectant management of the third stage of labour: a Swedish randomised controlled trial. BJOG: an international journal of obstetrics and gynaecology 2011. 2011;118(3):362-369.
- Jerbi M, Hidar S, Elmoueddeb, Chaieb A, Khairi H. Oxytocin in the third stage of labour. International Journal of Gynecology and Obstetrics. 2007;96(3):198-9.
- Kanikosmay F. Third stage: the why of physiological practice. Midwives, the official journal of the Royal College of Midwives. 2007;10(9):422-5.
- Kashanian M, Fekrat M, Masoomi Z, Ansari NS. Comparison of active and expectant management on the duration of the third stage of labour and the amount of blood loss during the third and fourth stage of labour: a randomised controlled trial. Midwifery. 2010;26(2):241-5.
- Khan GQ, John IS, Wani S, Doherty T, Sibai BM. Controlled cord traction versus minimal intervention techniques in delivery of the placenta: a randomised controlled trial. American Journal of Obstetrics and Gynecology. 1997;177(4):770-4.
- Khan KS, Wojdyla D, Say L, Gülmezoglu AM, Van Look PF. WHO analysis of causes of maternal death: a systematic review. Lancet. 2006;367(9516):1066-74.
- Lazarus JV, Lalonde A. Reducing postpartum haemorrhage in Africa. International Journal of Gynecology and Obstetrics. 2005;88(1):89-90.
- Magann EF, Doherty DA, Briery CM, Niederhauser A, Chauhan SP, Morrison JC. Obstetric characteristics for a prolonged third stage of labor and risk for postpartum hemorrhage. Gynecologic and Obstetric Investigation. 2008;65(3):201-5.
- Magann EF, Doherty DA, Briery CM, Niederhauser A, Morrison JC. Timing of placental delivery to prevent post-partum haemorrhage: lessons learned from an abandoned randomised clinical trial. Australian and New Zealand Journal of Obstetrics and Gynaecology. 2006;46(6):549-51.
- Maughan KL, Heim SW, Galazka SS. Preventing postpartum hemorrhage: managing the third stage of labor. American Family Physician. 2006;73(6):1025-8.

MISCELLANEOUS

- Government of India. Annual Report Ministry of Health and Family Welfare". 2004-2005. 161-163, 165, 171-172.
- ICM 2008. International Confederation of Midwives .Role of the Midwife in Physiological Third Stage Labour: Position Statement. International Confederation of Midwives; The Hague: 2008.
- ICM-FIGO. International Confederation of Midwives (ICM) International Federation of Gynaecology and Obstetrics (FIGO) Management of the third stage of labour to prevent post-partum haemorrhage. Joint statement. 2008
- Penney G, Adamson L, Kermaghan D; Scottish confidential audit of severe maternal morbidity. Second Annual Report 2004. Aberdeen. Scottish Programme for Clinical Effectiveness in Reproductive Health. 2005
- Royal College of Midwives, Third Stage of Labour: Midwifery Practice Guideline. RCM; London: 2008.
- The Seventh Report on Confidential Enquiries into Maternal Deaths in the United Kingdom. CEMACH; London: 2007.
- WHO. "Beyond the Number: Reviewing maternal deaths and complications to make pregnancy safer". Geneva. 2004.
- White Ribbon Alliance/ India. "Saving mothers' lives: a field guide for implementing best practice in safe motherhood", September 2002.