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A STUDY BETWEEN USE OF MISOPROSTOL VERSUS OXYTOCIN IN CONTROL OF POSTPARTUM HAEMORRHAGE

Gynaecology

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ABSTRACT

Aim: This study was done to compare the efficacy of misoprostol and oxytocin in prevention of postpartum haemorrhage. Methods: This study was done for a period of one year from January 2016 to December 2016 in patients who were admitted for delivery in obstetrics and gynaecology department of JLNMCH, Bhagalpur. Thorough examination, investigations and management were performed. A total of 200 cases were taken in the study. Patients were divided in to two groups OF 100 each. Group A (Misoprostol rectally given immediately following delivery of baby) and Group B (Oxytocin given intramuscularly immediately after delivery) Results: The average blood loss after delivery in Group A was 200ml and in Group B it was 160ml. Change in Haemoglobin percentage was 1gm/dl in Group A and 0.70gm/dl in Group B. Incidence of PPH was 5% and 3% in group A and group B respectively. Group A patients have more complaints of fever than Group B. Conclusion: it is seen in this study that oxytocin is better in management of PPH. And thus oxytocin can be used in third stage of labour to prevent PPH.

KEYWORDS:

Postpartum, Haemorrhage, Oxytocin, Misoprostol

Introduction-

PPH is the most serious complication in obstetric practice. The greatest number of maternal deaths from hemorrhage is due to PPH, which is almost entirely a preventable condition. PPH occurs in approximately 4% of vaginal deliveries, and estimates are that it causes significant morbidity and 25% of all the maternal child birth related deaths. The WHO defines PPH as blood loss of 500 ml or more in first 24 h post partum. Postpartum blood loss is difficult to evaluate especially in developing country like India where most of the women are anaemic with poor reserve and this conditions are further aggravated by increased demand during pregnancy and blood loss during 3rd stage of labor. The days of expectant management, the so called "hands off" approach seems to be over, in view of serious consequences of PPH. An attempt was hence made to study the efficacy of various oxytocics i.e. oxytocin and misoprostol in reducing blood loss in active management of third stage labor. Oxytocin and ergot preparations are commonly used, either alone or in combination, as uterotonic agents for the prevention of primary PPH. Although effective in decreasing blood loss, these agents have disadvantages, including the requirement of refrigeration of ergot to preserve effectiveness. Oxytocin must be administered parenterally, which in developing countries may preclude its use due to the increased cost of syringes, the trained personnel required for administration and disposal, and the risk of transmitting blood-borne viral infections. Ergot preparations are associated with nausea, vomiting, and elevated blood pressure. Oxytocin, when given intravenously, may cause hypotension. Alternate uterotonic agents with a more favourable sideeffect profile include prostaglandin derivatives. Misoprostol is an inexpensive prostaglandin E 1 analogue that is administered orally and is stable at room temperature. Preliminary reports on the use of oral misoprostol for the prevention of primary PPH have been encouraging. A prospective observational study of 237 women given oral misoprostol (600 flg) following delivery demonstrated comparable rates of primary PPH, length of third stage, and the need for additional oxytocic drugs, to women given parenteral Syntometrine (a combination of 5 IU oxytocin and 0.5 mg ergometrine, manufactured by Sandoz). A subsequent randomized controlled trial of 500 women, comparing 400 flg of oral misoprostol with placebo, showed a significantly lower risk of primary PPH (over 1 L loss) within the first hour after birth and no serious side effects. Both trials reported increased shivering in the misoprostol group. As nausea and vomiting are common at delivery, many women are unable or reluctant to swallow a tablet at the immediate point of delivery, suggesting non-oral routes of uterotonic medication to be advantageous. We therefore performed a randomized controlled trial of rectal misoprostol compared to parenteral oxytocin for the routine management of the third stage of labour.

Material and Methods

This study was done for a period of one year from January 2016 to December 2016 in patients who were admitted for delivery in obstetrics and gynaecology department of JLNMCH, Bhagalpur. Thorough examination, investigations and management were performed. A total of 200 cases were taken in the study. Patients were divided in to two groups OF 100 each. Group A (Misoprostol rectally given immediately following delivery of baby) and Group B (Oxytocin given intramuscularly immediately after delivery) Hemoglobin was measured at the time of admission. At the time of delivery of anterior shoulder, either IM oxytocin or rectal misoprostol was administered depending on the lottery. Placenta was delivered by controlled cord traction. Preweighed sterile drapes were used and blood collected in calibrated bucket. Preweighed pads were given to the patient for next 48 hours. All the soaked drapes and pads were weighed in the weighing scale which was then substracted from the initial weight of dry drapes and pads. A hundred gram increase in weight was considered to be equivalent to 100ml of blood loss (assuming specific gravity of blood equivalent to 1gm/ml).9 The woman was encouraged to breast feed the baby. Strict record of her vital signs was maintained and uterine contractility was noted every thirty minutes for first four hours. Any heavy bleeding was noted for next 48 hours. Hemoglobin values were carried out after 24 hours of delivery. In our study, difference in pre and post delivery hemoglobin was estimated to calculate the blood loss. Side effects of uterotonics i.e. fever, shivering and abdominal pain were noted.

Results

The average blood loss after delivery in Group A was 200ml and in Group B it was 160ml. Change in Haemoglobin percentage was 1gm/dl in Group A and 0.70gm/dl in Group B. Incidence of PPH was 5% and 3% in group A and group B respectively. Group A patients have more complaints of fever than Group B.

DISCUSSION:

The active management of the third stage of labor is traditionally performed with the routine use of intravenous oxytocin. As the blood loss at delivery is a subjective observation rather than an objective measurement, the more reliable estimation of blood loss will be decline in haematocrit or haemoglobin and clinical examination. Thus, the difference in mean estimated blood loss between the groups will be better evaluated by difference in haemoglobin between pre-delivery and post-delivery haemoglobin level which is much more objective. In the present study, the mean fall in haemoglobin pre-delivery and post-delivery was 1gm/dl and 0.70gm/dl in misoprostol group and oxytocin group respectively. The incidence of shivering, pyrexia was found to be more in misoprostol group than oxytocin with the incidence. Shrestha et al. in their study among 200 cases found that the 16% patients developed shivering in misoprostol group and 4% developed in oxytocin group. The degree of shivering was mild to moderate and subsided spontaneously within 4-5 hours without any treatment.

Conclusion

It is seen in this study that oxytocin is better in management of PPH. And thus oxytocin can be used in third stage of labour to prevent PPH.

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