INTRODUCTION

The two kinds of obstetric hemorrhage are antepartum hemorrhage (APH) and postpartum hemorrhage (PPH). APH is mostly caused by placental abruption and placental Previa. Postpartum hemorrhage is the most common kind of uterine bleeding (PPH). According to the World Health Organization, it caused around a quarter of all maternal deaths worldwide in 2015. In the event of a normal vaginal delivery, blood loss of more than 500 ml is classified as postpartum hemorrhage (PPH), whereas blood loss of greater than 1000 ml is classified aspostpartum hemorrhage. The two categories of PPH are primary and secondary. Primary PPH occurs within 24 hours after delivery, but secondary PPH, or late PPH, develops between 24 hours and 6 weeks postpartum. Some countries define PPH as a lower blood loss threshold, while others use a greater one. It seems that misoprostol is a uterotonic agent. It is a prostaglandin E1 analog that was manufactured synthetically. This procedure often terminates pregnancies throughout the first and second trimesters. In addition, it is used in the induction of labour. The effects of uterotonics are highly powerful. It is handy since it may be administered orally and sublingually. In contrast to oxytocin,
which must be kept refrigerated and can only be supplied intravenously, this hormone may be held at ambient temperature for lengthy periods without losing its effectiveness. Shortly after delivery, both vaginal and surgical deliveries include the injection of uterotonic medicines, with oxytocin serving as the gold standard. The objective of this study was to compare the effectiveness of misoprostol with oxytocin alone in avoiding postpartum hemorrhage.

**MATERIALS AND METHODS**

Patients were recruited from the department of Obstetrics & Gynecology at Indore Medical College's labour ward. Before any research-related procedures, written informed consent was obtained in the relevant regional language from patients who indicated a wish to participate. Patients who lacked formal schooling had their left thumb imprints taken after a detailed explanation of the study and with the birth partner present to serve as an impartial witness. The demographic information of patients was collected. Patients who satisfied the inclusion and exclusion criteria of the research were recruited and randomly allocated to the A or B testing groups. In group A, women received the standard drug treatment of 10 IU of oxytocin intramuscularly, along with the other components of AMTSL (Active management of the third stage of labour) criteria. In group B, women received the standard drug treatment of 10 IU of oxytocin intramuscularly, along with 600 g of misoprostol administered orally during active management of the third stage of labour. The acquired data was statistically analyzed. The significance threshold utilized was 0.05.

**RESULTS**

According to [Table 1], the average Group A mother weighed 66.29 kilograms, whereas the average Group B mother weighed 69.84 kilograms. The average birth weight in group A was 2.83 Kg, whereas it was 2.91 Kg in group B. In group A, the average blood loss was 448.3 ml, whereas it was only 306.1 ml in group B. A significant difference (P 0.05) was observed.

[Table 2] shows that need for blood transfusion was seen in 27 in group A and 8 in group B. The difference was significant (P< 0.05).

According to [Table 3], 7 individuals in Group B and 66 patients in Group A needed additional stereogenic medications. A significant difference (P <0.05) was observed.

**DISCUSSION**

Postpartum hemorrhage is identified when blood loss is greater than 500 ml after a vaginal delivery and greater than 1000 ml following a cesarean section. Poor maternal health (PPH) is the major cause of maternal mortality and morbidity in developing and low-income countries. Even though several methods and suggestions have been developed for its prevention, the incidence of PPH continues to climb.

To reduce the incidence of PPH in pregnant women, the RCOG (Royal College of Obstetricians and Gynecologists) and the World Health Organization (WHO) advocate adhering to the AMTSL guidelines (Active Management of Third Stage of Labor). In addition to early cord clamping and uterine massage, the use of uterotonic drugs is an AMTSL requirement.

Oxytocin is often recommended as the first-line uterotonic medication for the treatment and prevention of PPH in clinical settings. And the negative effects are less severe. For intramuscular and intravenous administration of oxytocin, qualified medical personnel is required.

Ultimately, the efficacy of oxytocin is dependent on changes in the formulation’s pH when exposed to heat, rendering it unstable at ambient temperature and demanding specific storage conditions, including a temperature range of 20 °C–80 °C and cold chain maintenance until delivery. There is a
Misoprostol, a prostaglandin analog, may be administered orally, sublingually, rectally, vaginally, or buccally without the requirement for medical expertise. Misoprostol is inexpensive, easily available, and does not need specific storage conditions (such as refrigeration) to be preserved. This material is susceptible to becoming hydrated and wet when exposed to moisture. The objective of this study was to compare the effectiveness of misoprostol with oxytocin against oxytocin alone in avoiding postpartum hemorrhage.

The typical mother in group A weighed 66.29 kilograms, whereas the average mother in group B weighed 69.84 kg. The average birth weight in group A was 2.83 kgs, whereas it was 2.91 Kg in group B. In group A, the average blood loss was 448.3 mL, whereas it was only 306.1 mL in group B. Chaudhuri, P. et al. examined women with risk factors for postpartum hemorrhage to see if the use of misoprostol in combination with oxytocin was more beneficial than using oxytocin alone in reducing blood loss after vaginal delivery (PPH). Following a vaginal delivery, some subjects received sublingual oxytocin (10 units) and others received sublingual misoprostol (400 g). The primary objectives were 1-hour postpartum blood loss and the incidence of PPH. A treatment-intention analysis was conducted. 144 individuals were divided equally between the two groups. At 1 hour postpartum, misoprostol-treated women had significantly less blood loss than placebo-treated women (225.8 ± 156.7 mL vs. 302.4 ± 230.3 mL; P < 0.001). Misoprostol significantly decreased the incidence of moderate PPH (500-999 mL) compared to placebo (5 [3.5%] vs. 15 [10.4%] individuals; p < 0.03).

27 participants in group A and 8 participants in group B required a blood transfusion, respectively. Widmer et al. compared the effectiveness of misoprostol in conjunction with traditional uterotonic drugs to that of conventional uterotonic drugs used in the treatment of postpartum hemorrhage. Women were randomly randomized to receive 600 micrograms of misoprostol sublingually or a placebo, along with normal injectable uterotonics. The distribution of the therapy packets, which were sealed and numbered in the order of registration, helped conceal the allocation procedure. The treatment assignment was kept secret from both doctors and patients. Blood loss of 500 mL or more within 60 minutes after randomization was deemed the primary outcome. For a total of 1422 women, misoprostol (705 women) and placebo (717 women) were administered. Similar proportions of women in the misoprostol and placebo groups had 500 mL or more of blood loss within 60 minutes (100 [14%] and 170 [14%] respectively; relative risk 1.02, 95% confidence interval [CI]: 0.75 to 1.33). In the first 60 minutes, shivering (455/704 [65%] vs 230/717 [32%]; 2.01, 1.79-2.27) and body temperature of 38 degrees C or greater (303/704 [43%] vs 107/717 [15%]; 2.88, 2.37-2.50) were more prevalent in women using misoprostol than in those receiving placebo.

Overall, 36 individuals in Group A and 7 patients in Group B required additional stereogenic medications. Patted et al. investigated the adverse effects of 600 micrograms of oral misoprostol delivered to the mother and the newborn to avoid postpartum hemorrhage (PPH). During the third stage of labour, women in rural India who gave birth at home or in subcenters were randomly allocated to receive misoprostol or a placebo. At two and twenty-four hours postpartum, women were evaluated for shivering, fever, nausea, vomiting, and diarrhea. During the first 24 hours of a newborn's existence, diarrhea, vomiting, and fever were evaluated. Symptomlessness, mild symptoms, and severe symptoms were noted. Misoprostol-treated women were more likely to have to shiver (52% vs. 17%, p < 0.001) and fever (4.2% vs. 1.1%, p < 0.001) at 2 hours postpartum. The misoprostol group experienced significantly more incidences of chills (4.6% vs. 1.4%, p = 0.001) and fever (1.4% vs. 0.4%, p = 0.03) after 24 hours than the placebo group. There were no differences between the two groups in terms of nausea, vomiting, or diarrhea. The incidence of vomiting, diarrhea, and five among newborns did not alter.

**CONCLUSION**

When added to the standard dose of ten units of intramuscular oxytocin, a single dose of 600 mg of sublingual misoprostol decreased blood loss more than the standard dose of ten units of intramuscular oxytocin alone.

**REFERENCES**

