INTRAUTERINE VERSUS SUBLINGUAL MISOPROSTOL FOR THE CONTROL OF INTRA AND POSTOPERATIVE BLEEDING DUE TO ATONIC UTERUS IN CESAREAN DELIVERY

By

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ABSTRACT

Background: Postpartum hemorrhage (PPH) and intra-operative blood during cesarean delivery is a major concern to all obstetricians, misoprostol is a prostaglandin E1 analogue with good uterotonic properties and has been evaluated for both prevention and treatment of postpartum haemorrhage.

Objective: To compare between intrauterine and sublingual misoprostol for the prevention of intra and postoperative uterine atonic bleeding in cesarean delivery.

Patients and methods: This study was a randomized controlled clinical trial. This study was carried out at conducted in the operative rooms of Bab Al-Sharia Maternity Hospital, Obstetrics and Gynecology Department, Al-Azhar University, from July 2020 till January 2021. Two hundred pregnant women were recruited from the operative rooms of Bab- Al Sharia Maternity Hospital, Obstetrics and Gynecology Department, Al-Azhar University.

Result: There were insignificant difference between both groups as regards age, gravidity, parity, abortion, gestational age (in weeks), risk factor and previous surgery and side effects. There was significant difference between both groups as Blood loss (Intra-operative, Post-operative and overall.

Conclusion: Intrauterine misoprostol (600 mg), is effective in decreasing the incidence of PPH and reducing the amount of postpartum blood loss. Also, it reduced the need for blood transfusion, the extra ecbolics, and additional intervention and with less reduction in postoperative hemoglobin (HB) level and hematocrit level when compared to oxytocin alone.

Keywords: Cesarean delivery, Misoprostol, Sublingualmisoprostol.

INTRODUCTION

Misoprostol (15-deoxy-16-hydroxy-16-methyl prostaglandin E1) is a synthetic prostaglandin E1 analogue. Misoprostol acts via interacting with prostaglandins E (PGE) receptors. There are four isoforms of the PGE receptor (EP1–4), which act through different intracellular pathways (Arrowsmith et al., 2010).

The uterus has two distinct nervous pathways. Parasympathetic fibers (Frankenhäuser plexus, S2 to S4) provide innervation to the cervix and lower portion of the uterus, and sympathetic fibers (ovarian nerve plexus, T10 to L1)
provide innervation to the fundus of the uterus (Xin et al., 2019).

Theoretically, uterine contractions can be achieved through pharmacological stimulation of these sources using misoprostol for control of atonic postpartum hemorrhage (Marjoribanks et al., 2010).

For postpartum hemorrhage prevention (off-label use) sublingual 600 mcg as a single dose administered immediately after delivery (onset of action: 11 min, duration of action: 3 hours) (Tang et al., 2010).

Many of the global gains in reducing maternal mortality can be attributed to developments in preventing and treating postpartum hemorrhage (PPH). In fact, the biggest absolute reduction was in maternal deaths due to hemorrhage (Kassebaum et al., 2014).

PPH is often associated with the failure of the uterus to contract after delivery and categorized as blood loss of 500 mL or more following vaginal delivery or 1,000 mL after cesarean delivery (Mousa and Afirevic 2010).

PPH is categorized as early if it occurs within 24 hours of delivery and late if excessive blood loss occurs at 24 hours or more after delivery (Evensen et al., 2017).

The reality is that most cases are primary PPH and the time from beginning to death is considerably shorter than other major obstetric complications. Two factors have been identified as significantly affecting the potential for death from PPH (Bazirete et al., 2020). First, the initial hematocrit level of a woman affects her survival rate from PPH (Karoshi and Keith, 2012).

The second factor that has been identified as contributing to mortality rates from PPH has more levers for influence, as it relates to access to a hospital with functioning facilities for the management of PPH, including blood banks and staff trained to diagnose and treat PPH (Panyapin and Deoisres, 2020).

Although effective tools for the prevention and treatment of PPH are available, most are not feasible or available for use in the resource-poor countries, where many births still occur at home with untrained birth attendants (Karoshi and Keith, 2012).

**The aim of the present study was to** compare between intrauterine and sublingual misoprostol for the prevention of intra and postoperative uterine atonic bleeding in cesarean delivery.

**PATIENTS AND METHODS**

This study was a randomized controlled clinical trial. This study was carried out at conducted in the operative rooms of Bab Al-Sharia Maternity Hospital, Obstetrics and Gynecology Department, Al-Azhar University, from July 2020 till January 2021. Two hundred pregnant women were recruited from the operative rooms of Bab- Al Sharia Maternity Hospital, Obstetrics and Gynecology Department, Al-Azhar University.

**Inclusion criteria:** Pregnant women aged 20–40 years, past history of PPH, failed trial of induction and high risk group women with noticeable factors: Twins, gestational DM, polyhydramnios, LFD and delivery under spinal
Exclusion criteria: Antepartum hemorrhage in this pregnancy, preterm or post-term delivery, severe anemia with HB <8mg/dL, history of preexisting maternal hemorrhagic conditions such as factor 8 or 9 deficiency or von Willebrand’s disease and women with placenta Previa.

Sample size: Two hundred females with pregnancies.

Sampling technique: systematic random sampling technique was used.

Randomization: Computer-generated randomization schedules was generated and placed in sequentially numbered sealed opaque envelopes. Block randomization with a block size of four was used with a 1:1 ratio of both groups. Women were recruited, gave consent and opened the randomization envelopes in early labor. Also, the women were recruited before revealing the allocation. Sealed opaque envelope method was used for the allocation. The allocation was blinded to both recruiter and participant.

All patients were subjected to the following:

1. Detailed personal, obstetric and medical history including: Personal history including age, smoking and level of education. Obstetric history including gravidity, parity, number of abortions, modes of delivery in previous pregnancies, first day of the last normal menstrual period and the gestational age, onset, duration and frequency of labor pains, urinary symptoms (dysurea, frequency, urgency), vaginal discharge (color, itching).

Medical history including Present or Past history of any chronic illnesses (renal, hypertensive, diabetics, hepatic, cardiac,….).

2. Examination: Vital signs: Blood pressure, pulse and temperature, Weight, height, BMI and Abdominal examination for assessment of fundal level and fetal heart sounds.

Abdominal palpation to detect uterine activity (frequency, duration and strength), assess fetal size and presentation.

Assessment of contraction done to diagnose threatened preterm birth (Contractions must be of four in 20 minutes or eight in 60 minutes each last 30 seconds or more with cervical changes (dilatation ≤ 3 cm, effacement ≤ 80%).

Vaginal Examination: Digital vaginal examination to assess degree of cervical dilatation, effacement and fetal presentation were initially recorded


4. Lab assessment: All investigations obtained according to standard protocol of PTL in our hospital including complete blood count, CRP and grouping, liver enzymes, kidney functions, random blood sugar, hemoglobin (HB) and hematocrit levels was made before and 24 h after delivery.
Intervention: The patients (200 pregnant women) were divided into equal two groups:

Group A: women to whom three tablets (600 mg) of misoprostol (Misotac®, Sigma, SAE, Egypt) was administered sublingually after delivery of the placenta.

Group B: women to whom three tablets (600 mg) of misoprostol (Misotac®, Sigma, SAE, Egypt) was placed intrauterine (fundal and near to right cornu due to peacemaker of the uterus) after delivery of the placenta and swabbing the cavity, the surgeon placed tablets in the uterine cavity at the fundus while suturing the first layer of the uterus.

For each patient, the amount of blood loss was estimated using the standardized visual estimation method and corrected by calculating the volume of blood loss during CS delivery and 6 h postoperatively. The whole blood loss equals the total loss of blood during CS delivery which was calculated by adding the volume of the suction bottle to that blood-soaked sponges (weighting method), all these was added to the volume of blood loss after CS which was measured by using blood collection drape. All women were followed up postoperatively for 24 h then dismissed.

Outcome measures: The primary outcome measure was the estimation of the amount of blood loss during and after cesarean delivery following administration of intrauterine and sublingual misoprostol and calculation of incidence of PPH (>1000 ml blood loss) within the first 6 h of labor in both groups.

The secondary outcome measures was the need for blood transfusion, the need for any additional ecbolic drugs, and the changes in hematocrit and HB in both groups after delivery, and the incidence of side effects.

Ethical committee:

An informed verbal consent from parents of the participants was taken and confidentiality of information was assured. Permission from the faculty of medicine ethical committee was also obtained and approval from institutional review board was taken.

Statistical analysis:

Data were fed to the computer and analyzed using IBM SPSS software package version 20.0. (Armonk, NY: IBM Corp) Qualitative data were described using number and percent. The Kolmogorov-Smirnov test was used to verify the normality of distribution Quantitative data were described using range (minimum and maximum), mean, standard deviation, median and interquartile range (IQR). Qualitative data were represented as frequencies and relative percentages. Chi square test ($\chi^2$) to calculate difference between two or more groups of qualitative variables. Independent samples t-test was used to compare between two independent groups of normally distributed variables (parametric data). P value < 0.05 was considered significant.
RESULTS

There was insignificant difference between both groups as regards age (Table 1).

Table (1): Comparison between the two studied groups according to age

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Group A (n = 100)</th>
<th>Group B (n = 100)</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. – Max.</td>
<td>20.0 – 35.0</td>
<td>20.0 – 35.0</td>
<td>1.365</td>
<td>0.174</td>
</tr>
<tr>
<td>Mean ± SD.</td>
<td>26.93 ± 4.36</td>
<td>27.80 ± 4.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>26.0 (23.0 – 31.0)</td>
<td>28.0 (24.0 – 32.0)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

t: Student t-test, IQR: Inter quartile range
p: p value for comparing between the studied groups

There was insignificant difference between both groups as regards gravidity, parity and abortion (Table 2).

Table (2): Comparison between the two studied groups according to obstetric history.

<table>
<thead>
<tr>
<th>Obstetric history</th>
<th>Group A (n = 100)</th>
<th>Group B (n = 100)</th>
<th>( \chi^2 )</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Gravidity</td>
<td>Gravidity</td>
<td>Primigravida</td>
<td>29</td>
<td>29.0</td>
</tr>
<tr>
<td></td>
<td>Primigravida</td>
<td>Multigravida</td>
<td>71</td>
<td>71.0</td>
</tr>
<tr>
<td></td>
<td>Primigravida</td>
<td>1</td>
<td>29</td>
<td>29.0</td>
</tr>
<tr>
<td></td>
<td>Primigravida</td>
<td>2</td>
<td>37</td>
<td>37.0</td>
</tr>
<tr>
<td></td>
<td>Primigravida</td>
<td>3</td>
<td>34</td>
<td>34.0</td>
</tr>
<tr>
<td>Parity</td>
<td>Parity</td>
<td>0</td>
<td>39</td>
<td>39.0</td>
</tr>
<tr>
<td></td>
<td>Parity</td>
<td>1</td>
<td>33</td>
<td>33.0</td>
</tr>
<tr>
<td></td>
<td>Parity</td>
<td>2</td>
<td>28</td>
<td>28.0</td>
</tr>
<tr>
<td>Abortion</td>
<td>Abortion</td>
<td>No</td>
<td>84</td>
<td>84.0</td>
</tr>
<tr>
<td></td>
<td>Abortion</td>
<td>Yes</td>
<td>16</td>
<td>16.0</td>
</tr>
</tbody>
</table>

\( \chi^2 \): Chi square test
p: p value for comparing between the studied groups

There was insignificant difference between both groups as regards gestational age (in weeks) (Table 3).

Table (3): Comparison between the two studied groups according to gestational age (in weeks).

<table>
<thead>
<tr>
<th>Gestational age (in weeks)</th>
<th>Group A (n = 100)</th>
<th>Group B (n = 100)</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. – Max.</td>
<td>37.0 – 40.0</td>
<td>37.0 – 40.0</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Mean ± SD.</td>
<td>38.61 ± 1.14</td>
<td>38.61 ± 1.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>39.0 (38.0 – 40.0)</td>
<td>39.0 (38.0 – 40.0)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

t: Student t-test, IQR: Inter quartile range
p: p value for comparing between the studied groups
There was insignificant difference between both groups as regards risk factor and previous surgery (Table 4).

Table (4): Comparison between the two studied groups according to risk factor and previous surgery

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Group A (n = 100)</th>
<th>Group B (n = 100)</th>
<th>( \chi^2 )</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>LFD</td>
<td>35 (35.0)</td>
<td>34 (34.0)</td>
<td>4.642</td>
<td>MC, ( p = 0.201 )</td>
</tr>
<tr>
<td>Twins</td>
<td>1 (1.0)</td>
<td>7 (7.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gestational DM</td>
<td>31 (31.0)</td>
<td>29 (29.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polyhydramnios</td>
<td>33 (33.0)</td>
<td>30 (30.0)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( \chi^2 \): Chi square test, MC: Monte Carlo
\( p \): p value for comparing between the studied groups

There was a significant difference between both groups as blood loss (intra-operative, post-operative and overall) (Table 5).

Table (5): Comparison between the two studied groups according to blood loss

<table>
<thead>
<tr>
<th>Blood loss (ml)</th>
<th>Group A (n = 100)</th>
<th>Group B (n = 100)</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intraoperative</td>
<td></td>
<td></td>
<td>9.829*</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Min. – Max.</td>
<td>362.0 – 580.0</td>
<td>311.0 – 460.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean ± SD.</td>
<td>465.94 ± 72.18</td>
<td>381.53 ± 46.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>455.5 (394.0 – 537.0)</td>
<td>383.0 (337.5 – 418.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postoperative</td>
<td></td>
<td></td>
<td>10.325*</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Min. – Max.</td>
<td>37.0 – 152.0</td>
<td>15.0 – 96.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean ± SD.</td>
<td>94.68 ± 34.29</td>
<td>52.65 ± 21.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>92.50 (66.50 – 126.0)</td>
<td>53.0 (34.50 – 70.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td></td>
<td>12.833*</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Min. – Max.</td>
<td>405.0 – 713.0</td>
<td>339.0 – 549.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean ± SD.</td>
<td>560.62 ± 84.10</td>
<td>434.18 ± 51.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>561.0 (494.0 – 640.0)</td>
<td>431.0 (395.0 – 478.0)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

t: Student t-test, IQR: Inter quartile range
\( p \): p value for comparing between the studied groups
\*: Statistically significant at \( p \leq 0.05 \)
There was insignificant difference between both groups as regards side effects (Table 6).

**DISCUSSION**

Misoprostol, a prostaglandin E1 analogue with strong uterotonic properties, has been suggested as an alternative to injectable uterotonic agents for preventing postpartum hemorrhage following vaginal or cesarean deliveries. A recent Cochrane review found that oral misoprostol was associated with a higher risk of severe postpartum hemorrhage and use of additional uterotonics after vaginal birth when compared to conventional uterotonic agents (Lawrie et al., 2019).

However, oral or sublingual misoprostol was found to be more effective than placebo in reducing severe postpartum hemorrhage and blood transfusion after vaginal birth. The use of misoprostol during cesarean delivery to prevent hemorrhage attributable to uterine atony has received less attention and its effectiveness has not been systematically evaluated (Elbohoty et al., 2016).

In this study we showed that there was insignificant difference between both groups as regards Age. 

**Table 6**: Comparison between the two studied groups according to postpartum bleeding and Side effect

<table>
<thead>
<tr>
<th></th>
<th>Group A</th>
<th></th>
<th>Group B</th>
<th></th>
<th>( \chi^2 )</th>
<th>( P )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 100)</td>
<td></td>
<td>(n = 100)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postpartum bleeding</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Side effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pyrexia</td>
<td>5</td>
<td>5.0</td>
<td>8</td>
<td>8.0</td>
<td>0.740</td>
<td>0.390</td>
</tr>
<tr>
<td>Shivering</td>
<td>50</td>
<td>50.0</td>
<td>54</td>
<td>54.0</td>
<td>0.321</td>
<td>0.571</td>
</tr>
<tr>
<td>Vomiting</td>
<td>3</td>
<td>3.0</td>
<td>0</td>
<td>0.0</td>
<td>3.046</td>
<td>0.081</td>
</tr>
<tr>
<td>Headache</td>
<td>41</td>
<td>41.0</td>
<td>45</td>
<td>45.0</td>
<td>0.326</td>
<td>0.568</td>
</tr>
<tr>
<td>Giddiness</td>
<td>2</td>
<td>2.0</td>
<td>4</td>
<td>4.0</td>
<td>0.687</td>
<td>FEp=0.683</td>
</tr>
</tbody>
</table>

p: p value for comparing between the studied groups

Sayed et al. (2020) showed that there was no significant difference between 2 groups as regard age.

Ali (2012) showed that there was no significant difference between 2 studied groups in his study as regard age.

Nasr (2015) showed that no statistically significant differences were found between groups as regard age.

Abdelaleem (2019) showed that there was no significant difference between studied groups in his study as regard age.

Alalfy et al. (2020) showed that there was no statistically significant difference between the two groups regarding the age.

In this study we reported that there was insignificant difference between both groups as regards gravidity, parity and abortion.

Ali et al. (2012) showed that there was no significant difference between 2 studied groups in his study as regard parity.

Abdelaleem et al. (2019) showed that there was no significant difference
between studied groups in his study as regards gravidity, parity and abortion.

Sayed et al. (2020) showed that there was no significant difference between 2 groups as regard parity.

In this study we found that there was insignificant difference between both groups as regards gestational age (in weeks).

Nasr (2015) showed that no statistically significant differences were found between groups as regard gestational age.

Abdelaleem et al. (2019) showed that there was no significant difference between studied groups in his study as regard gestational age.

Alalfy et al. (2020) showed that there was no statistically significant difference (P> 0.05) between the two groups regarding the gestational age.

Ali et al. (2012) showed that there was no significant difference between 2 studied groups in his study as regard gestational age.

Sayed et al. (2020) showed that there was no significant difference between 2 groups as regard gestational age.

In this study we illustrated that there was insignificant difference between both groups as regards Risk factor and previous surgery.

Nasr et al. (2015) showed that no statistically significant differences were found between groups as regard risk factor.

Sayed et al. (2020) showed that there was no significant difference between 2 studied groups as regard Number of previous caesarean deliveries.

In this study we demonstrated that there was highly significant difference between both groups as blood loss (intra-operative, post-operative and overall).

Abdelaleem et al. (2019) showed that there was highly significant difference between studied groups in his study as regard Intraoperative blood loss, 2 hours postoperative blood loss and Overall blood loss.

Ali (2012) showed incidence and degree of PPH in both groups, we had found out that there were a statistically significant difference between both groups in incidence and degree of PPH.

Sayed et al. (2020) showed that women of rectal misoprostol group had a significantly higher amount of intraoperative blood loss compared to cases of sublingual misoprostol group.

Chaudhuri et al. (2014) showed that the mean intraoperative blood loss was lower among women receiving misoprostol plus oxytocin than among those receiving placebo plus oxytocin.

Alalfy et al. (2020) showed that estimated blood loss was significantly (p < 0.001) lower in the study group 442.59 (151.33) ml than in the control group 591.01 (287.97) ml with a mean difference of 148.42 (26.56) ml.

Vimala et al. (2010) showed that the estimated mean blood loss during CS was significantly lower among women receiving sublingual misoprostol 400mg (819±236ml) than among those receiving 20IU oxytocin (974±285ml, p=0.004) soon after delivery of the neonate.
In this study we showed that there was insignificant difference between both groups as regards Side effects.

*Sayed et al. (2020)* showed that the comparison between groups regarding side effects and the need for uterotonics. Shivering and nausea were almost similar between groups with no significant difference. However, the incidence of vomiting was significantly higher in the group (I) compared to group (II). The results showed that 7 cases (14.0%) in rectal misoprostol group needed uterotonics versus only 3 cases (6.0%) in the sublingual misoprostol group; the difference between the groups was not significant.

*Chaudhuri et al. (2014)* showed that the incidence of adverse effects was higher among women who received misoprostol (P b 0.001). However, most adverse effects were self-limiting and subsided with simple measures such as covering women with blankets for shivering and cold sponging for pyrexia. Pharmacological agents were not required for any of these conditions.

*Abdelaleem et al. (2019)* showed that the side effects in both groups. Shivering and pyrexia were more in common in the misoprostol group while vomiting, headache and giddiness were significantly higher among oxytocin group. No significant differences as regards uterine atony in the postpartum period of follow up.

*Alalfy et al. (2020)* showed that fever was encountered in one case (0.67%) of the study group and two cases (1.33%) of the control group, (p = 0.566). Nausea & vomiting was encountered in three cases (2.00%) of the study group and five cases (3.33%) of the control group, (p = 0.475). Shivering was encountered in one case (0.67%) of the study group and two cases (1.33%) of the control group, (p = 0.566).

In *Vimala et al. (2010)* study, the incidence of side effects such as pyrexia, shivering and metallic taste was significantly higher in misoprostol group compared to oxytocin group.

In *Owonikoko et al. (2011)* study, the incidence of adverse effects like shivering/pyrexia was significantly higher in the misoprostol group than in the oxytocin group.

Measurement of blood loss by the gravimetric method was the main limitation.

**CONCLUSION**

Intrauterine misoprostol (600) is more effective and less complicated than sublingual misoprotol (600) in decreasing the incidence of PPH and reducing the amount of postpartum blood loss. Also, it reduced the need for blood transfusion, the extra ecbolics, and additional intervention and with less reduction in postoperative HB level and hematocrit level when compared to oxytocin alone.

**REFERENCES**

Obstetrics and Gynecology, 8(4): 1662-68.


مقارنة بين تأثير استخدام عقار ميزوبروستول داخل الرحم أو أسفل اللسان للتحكم في حدوث نزيف بسبب عدم إنقباض الرحم أثناء أو بعد عملية الولادة القيصرية

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خلفية البحث: يعتبر نزيف ما بعد الولادة والدم أثناء العملية أثناء الولادة القيصرية مصدر قلق كبير لجميع أطباء التوليد، والميزوبروستول هو نظير للبروستاغلاندين E1 بخصائص موقوية لتثبيت الرحم جيدة وقد تم تقييمه للوقاية والعلاج من النزف التالى للولادة.

الهدف من البحث: المقارنة بين الميزوبروستول داخل الرحم وتحث اللسان لمنع حدوث نزيف أثناء أو بعد عملية الولادة القيصرية.

المريضات وطريقة البحث: تم إجراء هذه التجربة السريرية العشوائية المضبوطة. أجريت هذه الدراسة في غرف العمليات بمستشفى باب الشعرية للولادة، قسم أمراض النساء والتوليد بجامعة الأزهر، من يوليو 2020 حتى يناير 2021. تم تجنيد مائتي سيدة حامل من غرف عمليات باب الشرعية. مستشفى الشرعية للولادة، قسم النساء والتوليد، جامعة الأزهر.

نتائج البحث: لا يوجد فرق كبير بين المجموعتين فيما يتعلق بالعمر والحمل والتكافؤ والإجهام والوزن (كم، الارتفاع (سم)
ومؤشّر كتلة الجسم (كجم/م2) وعمر الحمل (بالأسابيع) وعامل الخطر والجراحة السابقة ويعتبر بالآثار الجانبية. وهناك فرق كبير بين المجموعتين مثل فقدان الدم (أثناء الجراحة وبعد العملية الجراحية وبشكل عام).

الاستنتاج: الميزوبروستول داخل الرحم (600 مجم) فعال في تقليل حدوث نزيف ما بعد الولادة وتقلييل كمية فقدان الدم بعد الولادة. أيضًا، الميزوبروستول قلل من الحاجة إلى نقل الدم، والتخفيفات الإضافية، والتدخل الإضافي مع إنخفاض أقل في مستوى الهيموجلوبين بعد الجراحة ومستوى الهيماتوكريت عند مقارنته بالأوكسيتوسين وحده.

الكلمات الدالة: الولادة القيصرية، الميزوبروستول، تحت اللسان الميزوبروستول.