COMPARATIVE STUDY BETWEEN CARBETOCIN VS COMBINATION OF ERGOMETRINE AND OXYTOCIN IN THE PREVENTION OF POST-PARTUM HEMORRHAGE AFTER CESAREAN SECTION

Mohamed Algharib
*Obstetrics and gynecology Alazhr university, amedawad72@yahoo.com*

ISMAIL EL GARHEY
*Obstetrics and Gynecology Department, Faculty of Medicine, Al-Azhar University, Egypt, ismailatalgarheyc@gmail.com*

ADEL ELBOGDADY
*Obstetrics and Gynecology Department, Faculty of Medicine, Al-Azhar University, Egypt, adelalyelboghdy@yahoo.com*

Follow this and additional works at: https://aimj.researchcommons.org/journal

Part of the Medical Sciences Commons, Obstetrics and Gynecology Commons, and the Surgery Commons

How to Cite This Article

Algharib, Mohamed; EL GARHEY, ISMAIL; and ELBOGDADY, ADEL (2021) "COMPARATIVE STUDY BETWEEN CARBETOCIN VS COMBINATION OF ERGOMETRINE AND OXYTOCIN IN THE PREVENTION OF POST-PARTUM HEMORRHAGE AFTER CESAREAN SECTION," *Al-Azhar International Medical Journal*: Vol. 2: Iss. 9, Article 7.
DOI: https://doi.org/10.21608/aimj.2021.89535.1543

This Original Article is brought to you for free and open access by Al-Azhar International Medical Journal. It has been accepted for inclusion in Al-Azhar International Medical Journal by an authorized editor of Al-Azhar International Medical Journal. For more information, please contact dryasserhelmy@gmail.com.
Comparative Study Between Carbetocin Vs Combination Of Ergometrine And Oxytocin In The Prevention Of Post-Partum Hemorrhage After Cesarean Section

Mohamed Awad Almetwally Algharib1, M.B.B.CH, Ismail Talat El Garhey1 MD, Adel Aly Elboghdady1 MD

*Corresponding Author:
Mohamed Awad Almetwally Algharib
amedawad72@yahoo.com

Received for publication August 06, 2021; Accepted September 16, 2021; Published online September 16, 2021.

Copyright The Authors published by Al-Azhar University, Faculty of Medicine, Cairo, Egypt. Users have the right to read, download, copy, distribute, print, search, or link to the full texts of articles under the following conditions: Creative Commons Attribution-Share Alike 4.0 International Public License (CC BY-SA 4.0).


1Obstetrics and Gynecology Department, Faculty of Medicine, Al-Azhar University Cairo, Egypt.

ABSTRACT

Background: Caesarean section is a known risk factor for Postpartum hemorrhage5, and the rate of caesarean births is on the rise around the world. The caesarean section is a bloody process; most surgeries lose between 750 and 1000 mL of blood and a postpartum hemorrhage (PPH) occurs when more than 1000 mL of blood is lost.

Aim of the work: there is difference between carbetocin vs combination of ergometrine and oxytocin in the prophylaxis of (PPH) following cesarean section.

Patients and methods: The study had been conducted at Obstetrics and Gynecology department, El-Hussein universal hospital included 200 pregnant women All cases were selected from Obstetrics and Gynecology department, El-Hussein universal hospital from January 2021 - June 2021.

Results: Estimated blood loss in Group (A) was ranged between 532-821 with mean ±S.D. 688.98±58.363 while in Group (B) was ranged between 834-1301 with mean ±S.D. 1026.97±65.379. P<0.001 indicated statistically significant differences across groups. The requirement for additional uterotonic in Group (A) is 4 (4.0 %), while in Group (B), the requirement is 67 (67.0 %). P<0.001 indicated statistically significant differences across groups.

Conclusion: Carbetocin has been shown to be effective in preventing atomic post-partum haemorrhage after cesarean section. It has the same potency as I.V. syntocinon and ergometrine combined. In comparison to the mixture of syntocinon and ergometrine, carbetocin alone had fewer maternal side effects such as increased blood pressure, nausea and vomiting. The carbetocin group uses less extra uterotonic medications than the syntocinon and ergometrine group. Compared to syntocinon and ergometrine, carbetocin causes less blood loss. It’s also linked to smaller reductions in hemoglobin levels after surgery.

Keywords: Caesarean; carbetocin; ergometrine; oxytocin; postpartum hemorrhage.

INTRODUCTION

Excessive bleeding at or after delivery, known as postpartum hemorrhage (PPH), is a potentially life-threatening condition that is one of the leading causes of maternal morbidity and mortality globally. Due to irreversible shock, maternal mortality happens often in a short time period. Anemia, tiredness, and depression are among the maternal morbidity effects.

Despite significant improvements in treatment in recent years, it is now recognized to account for about half of all postpartum maternal deaths in low- and middle-income nations. As a result, preventing PPH is critical in the quest for better women’s health care.

With an estimated death rate of 140 000 annually, or one mother death each four minutes, PPH is the greatest reason of maternal mortality globally. PPH happens in 5% of all deliveries and accounts for a significant portion of maternal deaths. The most of such fatalities happen within four hours of birth, implying that they are caused by the third stage of labor. PPH has been defined as a loss of blood of 500 ml or more in the 3rd stage of labor, while severe PPH has been defined as a loss of blood of 1000 ml or more. It has been demonstrated that active therapy of the 3rd stage of labor is effective in preventing PPH. Using a uteroton drug, early cord clamping, and controlled cord traction are three components of active treatment of the 3rd stage of labor. Currently, oxytocin and ergometrine are the most often used pharmacologic drugs. When oxytocin alone is compared to syntometrine (a combination of oxytocin and ergometrine), there is a statistically significant decrease in the risk of PPH for loss of blood greater than 500 ml but less than 1000 ml.

Nevertheless, the unpleasant negative impacts of nausea, vomiting, and raised blood pressure in
previously normotensive ladies were well reported as being significantly higher in syntometrine recipients. In the 3rd stage of labor, prophylactic usage of ergot alkaloids reduces loss of blood and PPH.

PATIENTS AND METHODS

The study had been conducted at Obstetrics and Gynecology department, El-Hussein universal hospital included 200 pregnant women all cases were selected from Obstetric and Gynecology department, El-Hussein universal hospital from January 2021 - June 2021.

Inclusion criteria: More than 37 weeks gestation: the gestational age would be established depending on the starting day of the last normal menstrual cycle and verified via ultrasound scanning during the first trimester.

Exclusion criteria: Vaginal delivery, Ladies having cesarean section under general anaesthetic would be excluded because carbetocin is only licensed to be used with regional anaesthetic in Egypt, gestational age less than 37 weeks and exclusion of any risk factor for postpartum hemorrhage for examples: Placenta previa, pregnancy induced hypertension, marked anemia, multiple pregnancy and accidental hemorrhage

Operational design: Explanation of the procedure to all women participating in the study. Before starting the study, all patients were asked to sign a written consent form and were counseled on the risks and benefits of the study.

The ladies who took part in the study have been separated into two groups: Group (A): 100 women who received a carbetocin ampoule 100 µg IV drip on 200 cc glucose after the fetal head was delivered. Group (B): 100 women who received a combination of intraoperative oxytocin 10 I.U. and ergometrine 0.2 mg after fetal head delivery.

Methods

The following procedures were carried out on the patients: Complete history taking: Personal history, including name, age, marital status, and address, as well as menstrual history: including age of Menarche, menstrual disturbance, dysmenorrhea, related symptoms, obstetric history including parity and mode of delivery, present history: of chronic diseases and medication, past history of HTN, DM, family history of similar condition or diabetes, history of allergy to any medication and surgical history of operation, laparoscopic interference, treatment of hirsutism by Laser.

Examination: General examination: Evaluation of vital signs and measurement weight, height (BMI). Abdominal and local clinical examination: to assess fundal level and gestational age, scar of previous operation, mass, tenderness or rigidity and any abdominal or pelvic clinically detectable pathology. Bimanual pelvic examination of both adenexa, and abdominal or pelvic clinically detectable pathology. Investigations: Laboratory investigations, Complete blood count, Rh typing, And coagulation profile: Prothrombin time, Partial Thromboplastin Time, INR, liver function testsand renal function tests. Ultrasound scan using trans abdominal ultrasound scan to: Confirm gestational age. Detect any risk factors for postpartum hemorrhage as placenta previa. In all cases, approved ethical committee taken, information sheet completed included Age, Parity, Gestational age at delivery, also the Blood pressure, Pulse, Temperature and Hemoglobin concentration hematocrite value noted before cesarean sections and 24 hours post-partum. The differences between pre- and post C.S values were calculated in each group. The uterine tone and size were determined by palpating the front wall of the uterus with a hand lying on the fundus. A boggy uterus combined with severe vaginal hemorrhage or an increase in uterine size may indicate uterine atony. Need for additional uterotonic drug in each group population were reported and tabulated. Incidence of postpartum hemorrhage was reported and tabulated

Study drug administration: The study drug (carbetocin or oxytocin) was delivered slowly (over 30–60 secs) intravenously by the anesthetist after the infant was born during CS. It was demonstrated that slow delivery reduces the potentially deleterious hemodynamic impacts of oxytocin (and, likely, carbetocin) (Tektook et al., 2019 and Kwon et al., 2020). Additional oxytocics were administered at the surgeon's discretion.

Ethical Consideration: Informed verbal consent had been obtained from each participant sharing in the study.

Statistical analysis of the data: Data was uploaded into the computer and analyzed with the IBM SPSS software program version 20.0. (Armonk, NY: IBM Corp). Numbers and percent were used to describe qualitative data. To ensure that the distribution was normal, the Kolmogorov-Smirnov test was applied. Ranges (minimum and maximum), mean, and standard deviation were used to describe quantitative data. The significance of the obtained findings was determined at a 5% level of significance.

RESULTS

Age in Group (A) was ranged between 27-43 years with mean ± S.D. 34.85±5.034 years while in Group (B) was ranged between 26-41 years with mean ± S.D. 33.71±4.522 years. P=0.103 indicated no statistically significant differences across groups. Table (1)

<table>
<thead>
<tr>
<th>Age</th>
<th>Group (A) (n=100)</th>
<th>Group (B) (n=100)</th>
<th>U</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min.-Max.</td>
<td>27-43</td>
<td>26-41</td>
<td>4335.00</td>
<td>0.103</td>
</tr>
<tr>
<td>Mean±S.D</td>
<td>34.85±5.034</td>
<td>33.71±4.522</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

U: Mann-Whitney test

p: p value for comparing the two groups under study
*: Statistically significant at P <0.05

Table 1: Comparison of two groups with regard to patient age (years)
Gestational age in Group (A) was ranged between 37-40 weeks with mean ± S.D. 38.54±1.176 weeks while in Group (B) was ranged between 37-40 weeks with mean ± S.D. 38.59±1.111 weeks. Where P=0.754, there were no statistically significant differences across groups. Table (2)

<table>
<thead>
<tr>
<th>Gestational Age</th>
<th>Group (A) (n=100)</th>
<th>Group (B) (n=100)</th>
<th>U</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min.-Max.</td>
<td>37-40</td>
<td>37-40</td>
<td>4876.00</td>
<td>0.754</td>
</tr>
<tr>
<td>Mean± S.D</td>
<td>38.54±1.176</td>
<td>38.59±1.111</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

U: Mann-Whitney test  
\( p \): p value for comparing the two groups under study  
*: Statistically significant at \( P <0.05 \)

Table 2: Comparison of two groups with regard to patient gestational age (weeks)

Estimated blood loss in Group (A) was ranged between 532-821 with mean ± S.D. 688.98±58.363 while in Group (B) was ranged between 834-1301 with mean ± S.D. 1026.97±65.379. \( P<0.001 \) indicated statistically significant differences across groups. Table (3)

<table>
<thead>
<tr>
<th>Estimated blood loss</th>
<th>Group (A) (n=100)</th>
<th>Group (B) (n=100)</th>
<th>U</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min.-Max.</td>
<td>532-821</td>
<td>834-1301</td>
<td>0.00</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Mean± S.D</td>
<td>688.98±58.363</td>
<td>1026.97±65.379</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

U: Mann-Whitney test  
\( p \): p value for comparing the two groups under study  
*: Statistically significant at \( P <0.05 \)

Table 3: Comparison of two groups with regard to patient estimated blood loss

Uterine tone in Group (A) show that 5(5.0%) had soft uterine tone and 95(95.0%) had firm uterine tone while in Group (B) 16(16.0%) had soft uterine tone and 84(84.0%) had firm uterine tone. \( P=0.019 \) indicated statistically significant differences across groups. Table (4)

<table>
<thead>
<tr>
<th>Uterine tone</th>
<th>Group (A) (n=100)</th>
<th>Group (B) (n=100)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Soft</td>
<td>5</td>
<td>5.0</td>
<td>16</td>
</tr>
<tr>
<td>Firm</td>
<td>95</td>
<td>95.0</td>
<td>84</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
<td>100</td>
</tr>
</tbody>
</table>

\( p \): p value for comparing the two groups under study  
*: Statistically significant at \( P <0.05 \)

Table 4: Comparison of two groups with regard to patient uterine tone

Need for additional uterotonic in Group (A) show that 4(4.0%) need for additional uterotonic while in Group (B) 67(67.0%) need for additional uterotonic. \( P<0.001 \) indicated statistically significant differences across groups. Table (5)

<table>
<thead>
<tr>
<th>Need for additional Uterotonic</th>
<th>Group (A) (n=100)</th>
<th>Group (B) (n=100)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>96</td>
<td>33</td>
<td>33.0</td>
</tr>
<tr>
<td>Yes</td>
<td>4</td>
<td>67</td>
<td>67.0</td>
</tr>
</tbody>
</table>

\( p \): p value for comparing the two groups under study  
*: Statistically significant at \( P <0.05 \)

Table 5: Comparison of two groups with regard to patient need for additional uterotonic

Adverse effect in Group (A) show that 5(3.0%) had headache, 4(4.0%) had Nausea and vomiting, 1(1.0%) had sweating and 9(9.0%) had fever while in Group (B) 36(36.0%) had headache, 24(24.0%) had Nausea and vomiting and 28(28.0%) had sweating. In terms of nausea and vomiting, sweating, as well as fever, there was a statistically significant difference across groups. Table (7)

<table>
<thead>
<tr>
<th>Adverse effect</th>
<th>Group (A) (n=100)</th>
<th>Group (B) (n=100)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Headache</td>
<td>28</td>
<td>28.0</td>
<td>34</td>
</tr>
<tr>
<td>Nausea and vomiting</td>
<td>4</td>
<td>4.0</td>
<td>24</td>
</tr>
<tr>
<td>Sweating</td>
<td>1</td>
<td>1.0</td>
<td>28</td>
</tr>
<tr>
<td>Fever</td>
<td>9</td>
<td>9.0</td>
<td>0</td>
</tr>
</tbody>
</table>

\( p \): p value for comparing the two groups under study  
*: Statistically significant at \( P <0.05 \)

Table 7: Comparison of two groups with regard to patient complications
DISCUSSION

Primary postpartum hemorrhage (PPH) is defined by the World Health Organization (WHO) as a loss of blood of 1000 mL after a cesarean section (CS). It is responsible for one-quarter of the leading direct reasons of maternal fatalities worldwide, and approximately one-third of maternal deaths in Africa and Asia.

Those who had a CS had a higher risk of postpartum complications than ladies who had a vaginal delivery (VD) or vaginal birth after cesarean section (VBAC). One of the challenges being advanced to reduce the high number of cesarean section cases is (VBAC). CS has the highest prevalence of major surgical intervention in various portions of the world. Previous CS delivery is one of the most important factors of an increasing rate of a repeated CS.

In the current study, we found that gestational age in Group (carbetocin) was with mean ± S.D. 38.31±1.11 weeks. Where P=0.754, there were no statistically significant differences between the two groups. Those who had a CS had a higher risk of postpartum hemorrhage than those who had a vaginal delivery (VD) or vaginal birth after cesarean section (VBAC). One of the challenges being advanced to reduce the high number of cesarean section cases is (VBAC). CS has the highest prevalence of major surgical intervention in various portions of the world. Previous CS delivery is one of the most important factors of an increasing rate of a repeated CS.

In another study of Zein El Abdeen et al., it was ranged between 834-1301 with mean ± S.D. 1026.97±65.379. P<0.001 indicated statistically significant differences between groups.

In the current research, we discovered that Estimated blood loss in Group (A) was ranged between 532-821 with mean ± S.D. 688.98±58.363 while in Group (B) was ranged between 834-1301 with mean ± S.D. 1026.97±65.379. P<0.001 indicated statistically significant differences between groups.

Primary postpartum hemorrhage (PPH) is defined by the World Health Organization (WHO) as a loss of blood of 1000 mL after a cesarean section (CS). It is responsible for one-quarter of the leading direct reasons of maternal fatalities worldwide, and approximately one-third of maternal deaths in Africa and Asia.

In another study done by Maged et al., they received a mixture of intravenous oxytocin and intramuscular ergometrine; their mean ± S.D. of GA was (38.31±1.11weeks).

In the current research, we discovered that Estimated blood loss in Group (A) was ranged between 532-821 with mean ± S.D. 688.98±58.363 while in Group (B) was ranged between 834-1301 with mean ± S.D. 1026.97±65.379. P<0.001 indicated statistically significant differences between groups.

In another study of Zein El Abdeen et al., they received a mixture of intravenous oxytocin and intramuscular ergometrine; their mean ± S.D. of GA was (38.31±1.11weeks).

In the current research, we discovered that Estimated blood loss in Group (A) was ranged between 532-821 with mean ± S.D. 688.98±58.363 while in Group (B) was ranged between 834-1301 with mean ± S.D. 1026.97±65.379. P<0.001 indicated statistically significant differences between groups.

In another study of Zein El Abdeen et al., it was ranged between 834-1301 with mean ± S.D. 1026.97±65.379. P<0.001 indicated statistically significant differences between groups.

In the current research, we discovered that Estimated blood loss in Group (A) was ranged between 532-821 with mean ± S.D. 688.98±58.363 while in Group (B) was ranged between 834-1301 with mean ± S.D. 1026.97±65.379. P<0.001 indicated statistically significant differences between groups.

In another study of Zein El Abdeen et al., it was ranged between 834-1301 with mean ± S.D. 1026.97±65.379. P<0.001 indicated statistically significant differences between groups.

In the current research, we discovered that Estimated blood loss in Group (A) was ranged between 532-821 with mean ± S.D. 688.98±58.363 while in Group (B) was ranged between 834-1301 with mean ± S.D. 1026.97±65.379. P<0.001 indicated statistically significant differences between groups.

In another study of Zein El Abdeen et al., it was ranged between 834-1301 with mean ± S.D. 1026.97±65.379. P<0.001 indicated statistically significant differences between groups.

In the current research, we discovered that Estimated blood loss in Group (A) was ranged between 532-821 with mean ± S.D. 688.98±58.363 while in Group (B) was ranged between 834-1301 with mean ± S.D. 1026.97±65.379. P<0.001 indicated statistically significant differences between groups.

In another study of Zein El Abdeen et al., it was ranged between 834-1301 with mean ± S.D. 1026.97±65.379. P<0.001 indicated statistically significant differences between groups.

In the current research, we discovered that Estimated blood loss in Group (A) was ranged between 532-821 with mean ± S.D. 688.98±58.363 while in Group (B) was ranged between 834-1301 with mean ± S.D. 1026.97±65.379. P<0.001 indicated statistically significant differences between groups.

In another study of Zein El Abdeen et al., it was ranged between 834-1301 with mean ± S.D. 1026.97±65.379. P<0.001 indicated statistically significant differences between groups.

In the current research, we discovered that Estimated blood loss in Group (A) was ranged between 532-821 with mean ± S.D. 688.98±58.363 while in Group (B) was ranged between 834-1301 with mean ± S.D. 1026.97±65.379. P<0.001 indicated statistically significant differences between groups.
following birth, with the difference statistically significant.

In addition to above findings, the present study, we found that uterine tone in Group (A) showed that 5(5.0%) had soft uterine tone and 95(95.0%) had firm uterine tone while in Group (B) 16(16.0%) had soft uterine tone and 84(84.0%) had firm uterine tone. P=0.019 indicated statistically significant differences between groups.

In a harmony with our results, the study of Zein El Abdeen et al., 12 which reported that uterine atony occurred more in women in the group who received oxytocin with ergometrine (39%) in comparison to carbetocin group (21%). It was obvious that oxytocin group needed more oxytocics than carbetocin group. In terms of uterine atony, there was a significant association between the two groups with a P value of 0.005.

On the other hand, in terms of the demand for additional uterotonics, Group (cabergolin) has a 4(4.0%) need, but Group (B) has a 67(67.0%) need. P<0.001 indicated statistically significant differences between groups.

As per Attilakos et al., 13 377 ladies who had cesarean sections have been randomly assigned to receive either intravenous carbetocin 100 μg or intravenous oxytocin 5 IU following the baby was delivered. The carbetocin group required fewer uterotonics drugs that are consistent with our results.

Our findings were consistent with those of Samimi and Abedzadeh-Kalahroudi 19, who randomly assigned 200 ladies having vaginal birth to take carbetocin or syntometrine to avoid PPH. They discovered that the carbetocin group had a lesser need for extra uterotonics. Carbetocin is more efficient than syntometrine in preventing PPH, according to the researchers.

Our findings are likewise consistent with those of Maged et al., 10 who randomly assigned 100 ladies who delivered vaginally and had at least two risk factors for atomic PPH to receive either 100 μg intravenous carbetocin or 5 IU intramuscular oxytocin. They discovered that in the carbetocin group, hemorrhage, PPH, and the requirement for further uterotonics were all much lower.

Abdrabo, 13 reported that seven instances (14%) in the carbetocin group require extra uterotonic, whereas twenty one instances (42%) in the oxytocin and ergometrine group require extra uterotonic. As a result, the oxytocin and ergometrine group required significantly more uterotonics.

Su et al., 20 included four studies with a total of 1037 ladies in their meta-analysis (one study on VD and three studies on CS). In both CS and VDs, carbetocin is linked to a lower demand for uterine massage (RR 0.38, 95% CI 0.18–0.80; RR 0.70, 95% CI 0.51–0.94), respectively.

In the study on our hands, we found that as regard adverse effect in Group (A) showed that 3(3.0%) had adverse effect while in Group (B) 5(5.0%) had adverse effect. No statistically significant differences between groups were found at P=0.721.

In agreement with our findings, the study of Maged et al., 10 reported no significant difference in the incidence of nausea, vomiting, and shivering between the two study groups. Metallic taste, flush, headaches, dizzy, breathlessness, and itch were more common in the carbetocin group than in the oxytocin methergine group, whereas palpitations were more common in the oxytocin methergine group than in the carbetocin group.

In a study comparing the efficiency of intravenous carbetocin against intravenous oxytocin for the avoidance of atomic postpartum hemorrhage (PPH), Amornpetchakul et al., 14 found no significant difference in side effects between the two groups. There were no patients in either group who had a severe bleeding (EBL >1000 mL), had a transfusions, or had peripartum hysterectomy.

In the current study, we demonstrated that as regard complications; in Group (A) 28(28.0%) had headache, 4(4.0%) had Nausea and vomiting, 1(1.0%) had sweating and 9(9.0%) had fever while in Group (B) 36(36.0%) had headache, 24(24.0%) had Nausea and vomiting and 28(28.0%) had sweating. In terms of vomiting and nausea, sweating, and fever, statistically significant differences existed across groups.

On the other hand, Abdrabo, 13 reported that in terms of complications, 4 patients in the carbetocin group had primary PPH, 3 of whom were transfused with blood, whereas 5 patients in the oxytocin and ergometrine groups had primary PPH, 4 of whom were transfused with blood, and one patient had a hysterectomy for intractable postpartum hemorrhage. These results were statistically non-significant.

CONCLUSION

Carbetocin has been shown to be effective in preventing atomic post-partum haemorrhage after cesarean section. It has the same potency as I.V. syntocinon and ergometrine combined. In comparison to the mixture of syntocinon and ergometrine, carbetocin alone had fewer maternal side effects such as increased blood pressure, nausea and vomiting. The carbetocin group uses less extra uterotonic medications than the syntocinon and ergometrine group. Compared to syntocinon and ergometrine, carbetocin causes less blood loss. It’s also linked to smaller reductions in hemoglobin levels after surgery.

REFERENCES


