

Emergency Obstetric Hysterectomy: A Retrospective Analytical Study Over 2 Years at District Hospital Tamilnadu

B Uma Maheshwari

How to cite this article:

B Uma Maheshwari. Emergency Obstetric Hysterectomy: A Retrospective Analytical Study Over 2 Years at District Hospital Tamilnadu. Indian J Obstet Gynecol. 2020;8(4):251–257.

Author's Affiliation: Senior Civil Surgeon, Department of Obstetrics and Gynecology, Government Headquarters Hospital, Virudhunagar 626001, Tamilnadu, India.

Corresponding Author: B Uma Maheshwari, Senior Civil Surgeon, Department of Obstetrics and Gynecology, Government Headquarters Hospital, Virudhunagar 626001, Tamilnadu, India.

E-mail: umathilak@gmail.com

Abstract

Aim: Present study was undertaken with an aim to evaluate the incidence, maternal profile, indications, type, no. of transfusions, maternal outcome and how they are behaving over past 2 years (2018 – 2020) in our Government headquarters hospital virudhunagar. emergency obstetrics hysterectomy remaining an essential weapon in any obstetrics armoury.

Methods: Case sheets of emergency hysterectomy for there major indications (resistant atonic PPH, Rupture uterus, adherent placenta) were taken and analyzed.

Conclusion: Initially atonic PPH being the commonest indication for peripartum hysterectomy. According to present study rupture uterus being the commonest indication for peripartum hysterectomy, increasing no. of cs nowadays should be the reason for this change.

Keywords: Retrospective study; Caesarian section; Maternal mortality; Post Partum hemorrhage; Peripartum hysterectomy.

Introduction

Obstetrics is a bloody business. Even though the maternal mortality has been reduced dramatically by hospitalization for delivery and the availability of blood for transfusion, death from haemorrhage remains prominent.¹

Obstetrical haemorrhage is most likely to be fatal to mother in circumstances in which blood and blood components are not available immediately.² The establishment and maintenance of facilities that

allow prompt administration of blood are absolute requirement for acceptable obstetrical care.³

Hysterectomy was originally employed in Obstetrics a hundred years ago as a surgical attempt to manage life threatening Obstetrical haemorrhage and infection. Now a day it is generally performed as a life saving procedure in cases of rupture uterus, resistant PPH, morbid adhesion of placenta and uterine asepsis.⁴ On one hand it is used as a last resort to save a mother's life. On the other hand a women's reproductive capability is sacrificed.⁵

It is pathetic to perform an emergency hysterectomy on a young primi especially when the baby is dead or moribund. Often it is a difficult decision and requires a good clinical judgement.⁶

More often it needs to be carried out when the mother's condition is too critical to withstand the risks of surgery and anaesthesia. Performing an emergency hysterectomy on a vascular gravid uterus often distorted due to rupture needs expertise.⁷

The maternal outcome greatly depends upon the timely decision, the surgical skills and the speed of performing.⁸

The most common indication for emergency procedures is severe uterine hemorrhage that cannot be controlled by conservative measures.⁹ Such hemorrhage may be due to an abnormally implanted placenta (eg, placenta accreta), uterine atony, uterine rupture, coagulopathy, or laceration of a pelvic vessel. The relative frequency of these conditions varies among series and is dependent upon the patient population and practice patterns.

Planned hysterectomy at the time of delivery is a controversial procedure because of the increased morbidity related to surgery on the highly vascular pelvic organs.¹⁰ It has been advocated for parturients with gynecologic disorders such as leiomyomas or high grade cervical intraepithelial neoplasia, but in these cases surgery usually can be safely delayed until the pelvis returns to its prepregnant state.¹¹ Peripartum hysterectomy may also be scheduled for patients with early invasive cervical carcinoma, which can be managed by radical hysterectomy following a planned cesarean delivery, and for those with uterine infection unresponsive to postpartum antibiotic.¹²

A sequence of conservative measures to control uterine hemorrhage should be attempted before resorting to more radical surgical procedures. If an intervention does not succeed, the next treatment in the sequence should be swiftly instituted. Indecisiveness delays therapy and results in excessive hemorrhage.¹³ Moreover, there is a relationship between the duration of time that passes prior to deciding to perform the hysterectomy, the amount of blood loss, and the likelihood that the hysterectomy will be seriously complicated by coagulopathy, severe hypovolemia, tissue hypoxia, hypothermia, and acidosis, which further compromise the patient's status. Timing is critical to an optimal outcome: hysterectomy should not be performed too early or too late.¹⁴

In the past, most cases of intractable PPH followed vaginal delivery and were due to uterine atony. However, more recent case series and national databases show that more cases are now associated with cesarean delivery. Cesarean delivery for placenta previa carries a relative risk of 100 for peripartum hysterectomy, with many patients having a diagnosis of placenta accreta.¹⁵

A recent systematic review examined various techniques used when medical management is unsuccessful. These included arterial embolization, balloon tamponade, uterine compression sutures, and iliac artery ligation or uterine devascularization. At present, no evidence suggests that any one method is more effective for the management of severe PPH. Randomized controlled trials of the various treatment options may be difficult to perform. Balloon tamponade is the least invasive and most rapid approach and may thus be the logical first step.¹⁶⁻²⁰

Aim of the Study

Hysterectomy performed at or following delivery

may be life saving if there is severe obstetrical haemorrhage. Emergency Obstetrical Hysterectomy remains an essential weapon in any Obstetrician's armoury. Hence it is important to know the general indices, changing trends and indications of this weapon.²¹

Hence these are major indications for emergency Obstetric Hysterectomy. In my study it includes Hysterectomy following resistant atonic PPH, ruptured uterus and placenta accrete. It includes Hysterectomy for lower segment bleeding associated with uterine incision, placental implantation or laceration of major uterine vessels also. Hysterectomy following both vaginal delivery and Caesarean section are included.²²

Hysterectomy for large symptomatic myomas, septic abortion, hydatiform mole, carcinoma cervix, Carcinoma endometrium are excluded from my study. Hysterectomy in early pregnancy for non-Obstetrical indications are also excluded. Keeping this in mind that the present study was undertaken with an aim to Evaluate the incidence, Maternal Profile, Indications, type, no of Transfusions, Maternal Outcome and how they are behaving over past 2 years (2018-2020) in Our GHQH Hospital in Virudhunagar. Emergency postpartum hysterectomy is associated with significant blood loss, need for transfusion, postoperative complications and longer hospitalization partly because of its indications.²³

Historical Review

Joseph Cavallini (1768) was the first to propose the idea of removal of uterus at the time of Caesarean section. In 1869 Horatia Stores did the first documented Caesarean hysterectomy in human beings. He did a sub-total hysterectomy, cauterized the stump and fixed it to the abdominal wound. The patient expired on 4th Post Operative day.

In 1876 Edward Porro from Pavia was the first to do a successful Caesarean Hysterectomy in human beings. Porro's patient Julia Cavalini was an elderly dwarf primi with severely contracted pelvis. He did a primary section and then sub-total Hysterectomy using the same technique as Stores. Both mother and child survived.²⁴

Parro's famous memoir entitled 'Della Amputazione Utero Ovarica Complimento de Faqlio Caesariana' published in 1876. This paper stimulated world wide interest in Hysterectomy at the time of Caesarean Section. The first successful Caesarean Section Hysterectomy in the United States was performed by Richardson in 1881.²⁵

The turning point in the evolution of Caesarean Section operations came in 1882 when Sanger introduced suturing of the uterine incision.

Materials and Methods

Emergency obstetric hysterectomy encompasses hysterectomies that were performed in the immediate post partum period both following normal delivery and Caesarian sections. When it follows caesarian section it is called caesarian hysterectomy. If it follows normal delivery means it is post partum hysterectomy. Peripartum hysterectomy includes both.

Case sheets of emergency hysterectomy for these major indications [resistant atonic PPH, rupture uterus, adherent placenta] were taken and analysed. It is a retrospective analytical study over past 2 years 2018 Nov-2020 Nov in our GHQH, Virudhunagar. All 13 case records were available for analysis.

Each case record is analysed in detail in regard of age, parity, booking status, whether referral or not, indication type of hysterectomy, and post operative complications.

Detailed history and examination findings from case sheet noted. Emphasis was given on any obstetric interference /previous surgeries and risk factors. Previous caesarian, CPD, grand multi, mal presentations, Forceps/ Vacuum, Oxytocin/Gel induction, manual removal of placenta, previous MTP, placenta praevia, PIH, diabetes risk factors present in each case noted. Preoperative and post operative haemoglobin values noted.

If it is a referral case, place and facility referred from time delay, mode of transport and why patient, selected this facility everything noted thoroughly. Is there any time delay for proceeding to hysterectomy should be noted.

In cases of PPH hysterectomy was carried out only when all conservative measures failed. Medical management includes 20U syntodrip, iv Methergin, Inj. prostadin, rectal misoprostal which of these tried in each case noted. Whether uterine artery ligation, Internal iliac artery ligation, and Blynch done or not noted whether subtotal/total hysterectomy done were noted.

Per operative findings from case sheet noted. In cases of rupture uterus type/ extent/ site /size / Involvement of uterine vessels /broad ligament haematoma /colporrexis / bladder involvement were looked for. Decision on hysterectomy in cases of rupture taken depending on age / parity / extent of rupture /and infection.

Bladder and bowel repair done or not were noted. Injury to ureter during hysterectomy should be noted from case sheet. How it is managed also analysed.

Was the patient admitted in shock and prompt resuscitative measures done or not was noted. Blood transfusion was given in most cases. No of transfusions noted down.

Intra operative and post operative complications, duration of hospital stay and condition at discharge noted. In cases of maternal mortality, cause of death noted was and analysed.

By means of hospital-based data over two years I sought to evaluate the clinical indications and incidence of emergency peripartum hysterectomy by demographic characteristics and reproductive history.

Case sheets were collected from medical records department with the help of Medical Records Officer and Mrs. Kalaiselvista.

Results and Discussion

Total No of deliveries between 2018–2020 November is 7292. Total No of Peripartum hysterectomies was 13. 13 case records will be available for analysis. Incidence of hysterectomy in our hospital was 1.7/1000 live births.

The incidence of peripartum hysterectomy that is quoted in recent literature is 0.24–1.4 per 1000 births. But in our hospital is high 1.7/1000 live births. In certain institutions incidence of peripartum hysterectomy is low because of these reasons.

1. Surgeon is very resistant in deciding hysterectomy hence reproductive capability of the mother will be lost.
2. Senior skilled obstetrician should be available for this procedure.
3. Internal iliac art ligation is the logistic first approach in these institutions.

But in our hospital (District hospital) vascularsurg department not available. So We proceed to Medical Management → Baloontamponade → Uterine compression sutures → hysterectomy.

The present study compares c Emergency Peripartum hysterectomy in a Nigerian hospital - Kore et al (2001) - 1.5.

Table 1: Incidence of emergency hysterectomy following caesarean section was 0.9 per 1000 live birth.

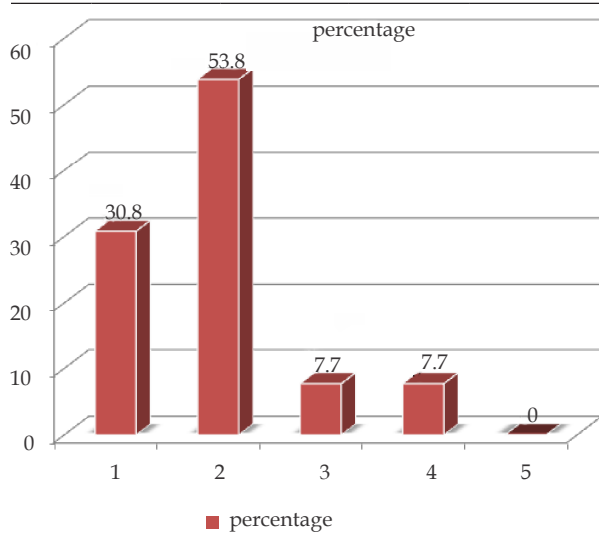
Duration	C.S/Total deliveries	Incidence Obsthysterectomy /1000 live births	Obst hysterectomy c H/o C.S
2018 -2020	51%	1.7	7(54%)

Among total deliveries 51% delivered by LSCS.

Of 13 hysterectomies, 7(54%) were done following caesarean section. 6 hysterectomies were following labour natural. (Table 1)

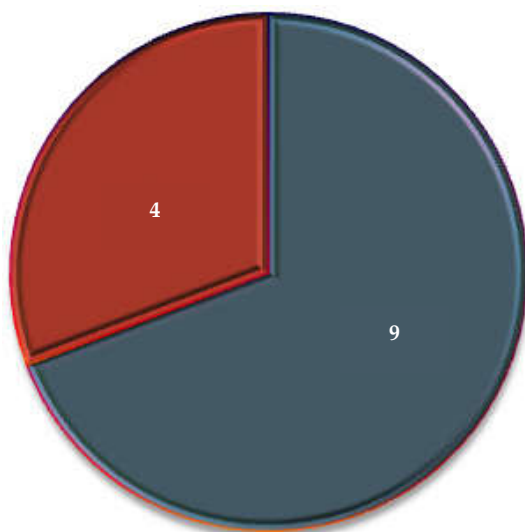
Table 2: Distribution of parity.

Parity	No.of cases	Percentage	Valid percentage	Cumulative percentage
1	4	30.8	30.8	30.8
2	7	53.8	53.8	84.6
4	1	7.7	7.7	92.3
5	1	7.7	7.7	100
6	0	0	0	0



Total no. of cases should be more in 4th and 5th gravida but it is less probably as a result of awareness regarding sterilization. The parity distribution was positively showed indicating that peripartum hysterectomy increased with parity.

Referral Status

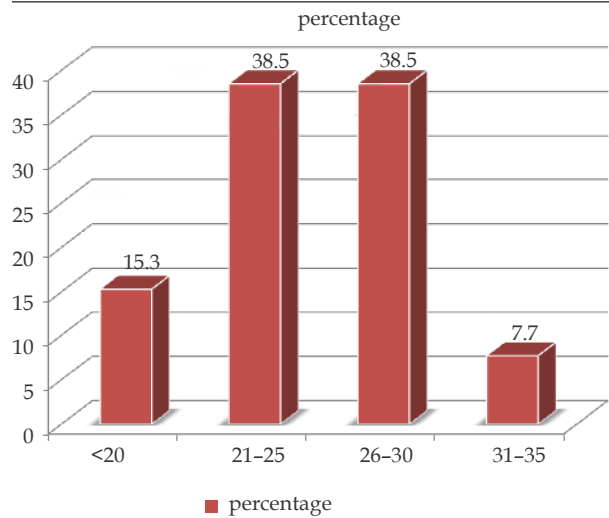


■ Referred from outside ■ not referred

Incidence of obstetric hysterectomy found to be more common in cases referred from outside.

Table 3: Majority of women belong to the age 20–30– years 2 women at the age of 20. Only one woman > 30.

Age	No. of cases	Percentage	Valid percentage	Cumulative percentage
<20	2	15.3	15.3	15.3
21 –25	5	38.5	38.5	53.8
26 – 30	5	38.5	38.5	92.3
31 – 35	1	7.7	7.7	100



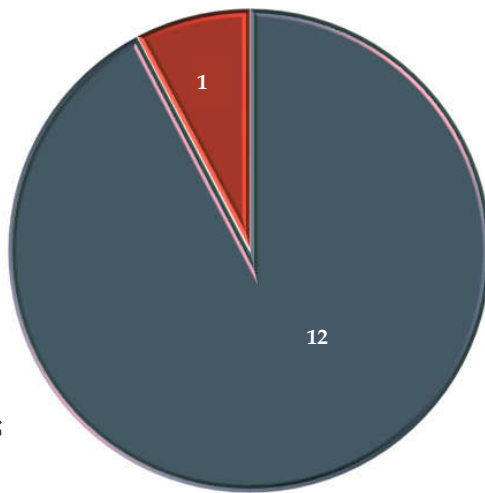
Age distribution in each year also analysed no significant inferences derived.

One or more risk factors present in each case.

1. Anemia
2. PIH / recurrent PIH
3. GDM/DM
4. Multi
5. prev.1 LSCS
6. Prev 21 LSCS
7. prev .MTP
8. prev .manual removal of placenta
9. hydramnios
10. twins
11. abruption
12. placentapraevia
13. induction of labours
14. Asthmatic
15. BOH
16. epilepsy
17. RH negative
18. DTA (deep transverse assest).

Previous LSCS being the most common risk factor in present series. Fornation of placenta accrete a 10 fold increased risk of peripartum hysterectomy in cases with a H/O caesarian. Knight et al showed that the associated risk of peripartum hysterectomy also extends beyond the initial CS into subsequent deliveries. one case has prev.² LSCS in our study. Kneep of al were also able to show that the no of prev. caesarian was related to an increased risk of placenta accrete, from 0.19% for previous 1 LSCS to 9.1% for 4 Prev. LSCS.

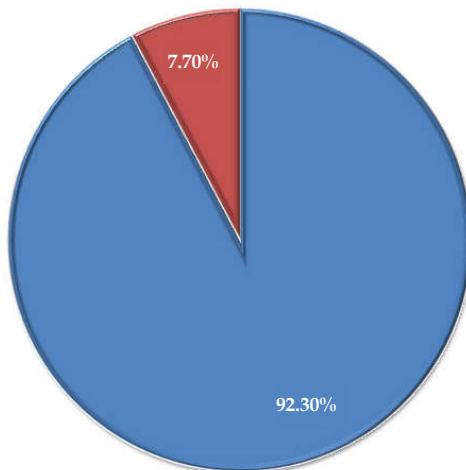
Types of hysterectomy



■ Sub Total ■ Total

Total hysterectomy done for placenta accrete case. Other cases proceeded with subtotal hysterectomy in order to save time.

Maternal Mortality



■ Discharge ■ Death

Indications of peripartum hysterectomy

Initially atonic PPH being commonest indication

for Peripartum hysterectomy. According to present study rupture uterus being the commonest indication for peripartum hysterectomy.

Increasing CS nowadays being the reason for => rupture uterus => commonest indication for peripartum hysterectomy.

Bujold and colleagues demonstrated a four fold increased risk uterine rupture with single layer uterine closure.

Conclusion

Incidence of Peripartum hysterectomy in our hospital is 1.7/1000 live births which is comparable to Emergency Peripartum hysterectomy in a Nigerian hospital Kore et al (2001) 1.5/ 100 live births.

Among total deliveries 51% delivered by LSCS. Obstetric hysterectomy - c H/o caesarian section is 54%. Incidence of emergency hysterectomy following caesarian section was 0.9/1000 live births. Majority of Women belong to the age group of 20-30 years.

Total No of cases should be more in 4th and 5th gravid but it is less probably as a result of awareness regarding sterilisation.

Incidence of Obstetric hysterectomy found to be more common in cases referred from outside.

Previous LSCS being the most common risk factor in present series.

Subtotal hysterectomy is the commonest procedure performed in order to reduce the operating time blood loss and morbidity.

Initially atonic PPH being the commonest indication for Peripartum hysterectomy.

Among these cases one case died because of Irregular Haemorrhagic shock because of resistant atonic PPH.

According to present study rupture uterus being the commonest indication for peripartum hysterectomy. increasing number of caesarian now a days should be reason for this change.

Caesarian delivery for praevia also carrier a relative risk if 100 for peripartum hysterectomy with many patients having diagnosis of placenta accrete.

In a review of emergency peripartum hysterectomies over a 5year period in los angeles .calif ,the rate was 1 in 1000 deliveries ,but most of these cases began as caesarian deliveries usually for placenta praevia.

There was 1 maternal death which gives the mortality rate of 7.7% which is comparable to 8% of kantanita (2003) which appears to be the Indian average.

The incidence of obstetric hysterectomy has been on the rise over part 10 years silently and slowly. It sounds an alarm to obstetricians. It is essential that every obstetrician should be skilled enough to do this procedure.

Reference

- Identifying Risk factors for uterine rupture Clinics in Perinatology – Volume 35, Issue 1(March 2008).
- Changing trends in peripartum hysterectomy over the last 4 decades J ObstetGynaecol India Vol. 55, No.2: March/April 2005 Pg 132-134.
- American Journal of Obstetrics and Gynecology - Volume 200, Issue 6 (June 2009).
- Emergency Obstetric Hysterectomy: 8 year review at Taif Maternal Hospital, Saudi Arabia- Afaf R.A. Alsayali,DGO; Salah M.A. Baloul, MRCOG 454 Annals of Saudi Medicine, Vol 20, Nos 5-6, 2000.
- Emergency Peripartum Hysterectomy European Journal of Obstetrics and Gynecology and Reproductive Biology, Volume 113, Issue 2, Pages 178-181.
- Emergency Obstetric Hysterectomy – An Increasing Incidence - Deborah A. Gould, S. A. Butler-Manuel, Miren J. Turner, P. G. Carter Journal of Obstetrics and Gynaecology, 1999, Vol. 19, No.6, Pages 580 – 583, DOI 10.1080/01443619963761.
- Inevitable Peripartum Hysterectomy in a Tropical Hospital: Indications and Maternofetal Outcome – AdesiyunAdebiyiGbadebo, Eseiogbe Edwin, Ameh Charles Anawo Pakistan Journal Of Medical Sciences – Vol 24,January – March 2008, Number 1.
- Emergency Peripartum Hysterectomy in a Nigerian Hospital: A 20 year review - J. ObstetGynaecol 2004 Jun; 24(4):372-3.
- Obstetric Hysterectomy: Ramathibodi's experience: 1969-1987 C. Suchartwatnachai, V. Linasmita, K. Chaturachinda International Journal of Gynecology and Obstetrics, Volume 36, Issue 3, November 1991, Pages 183-186.
- Emergency Peripartum Hysterectomy: Experience at a Community Teaching Hospital Kastner, Elana S. MD; Figueroa, Reinaldo MD; Garry, David DO; Maulik, Dev MD, PhD Obstetrics and Gynecology: June 2002- Volume 99 - Issue 6 - p 971-975.
- Emergency Obstetric Hysterectomy- George Daskalakis, EleftheriosAnastasakisNikolaosPapan toniou, Spyros Mesogitis, Mariana Theodora and ArisAntsaklis ActaObstetricia et Gynecologica Scandinavica2007, Vol. 86, No. 2, Pages 223-227 , DOI 10.1080/00016340601088448.
- Emergency Peripartum Hysterectomy due to PlacentaPrevia/Accreta: 10 Years Experience - Yaw-Ren Hsu, Fu-Tsai Kung, Cherng-Jau Roan, ChiaYu Ou, Te-Yao Hsu Taiwanese Journal of Obstetrics and Gynecology, Volume 43, Issue 4, December 2004, Pages 206-210.
- Mortality and Morbidity of Emergency Obstetric Hysterectomy O. F. Giwa-Osagie, V. Uguru and O. Akinla Journal of Obstetrics and Gynaecology 1983, Vol. 4, No. 2, Pages 94-96.
- Emergency Obstetric Hysterectomy- A. M. Smith Department of Obstetrics, New Cross Hospital, Wolverhampton Journal of Obstetrics and Gynaecology 1982, Vol. 2, No. 4, Pages 245-248.
- Ten years experience of caesarean and postpartum hysterectomy in a teaching hospital in Hong Kong - W. C. Lau, Hedy Y. M. Fung, Michael S. Rogers European Journal of Obstetrics and Gynecology and Reproductive Biology, Volume 74, Issue 2, August 1997, Pages 133-137.
- Emergency Obstetric Hysterectomies for Postpartum Haemorrhage Wong WC, Kun KY, Tai CM.Department of Obstetrics and Gynecology, Pamela YoudeNethersole Eastern Hospital, Hong Kong. J ObstetGynaecol Res. 1999 Dec;25(6):425-30.
- Postpartum Hysterectomy - G. H. Eltabbakh, J. D. Watson International Journal of Gynecology and Obstetrics, Volume 50, Issue 3, September 1995, Pages 257-262.
- Emergency Postpartum Hysterectomy in Obstetric Practice J ObstetGynaecol Res 2000 Oct; 26(5):341-5.
- Ablative Caesarean Section and Post Partum Hysterectomy: Review of 11 years of Obstetric Practice Ann OstetGinecol Med Perinat. 1991 May-Jun; 112(3):179-87.
- Emergency Hysterectomy In Obstetric Practice: Five Year Review Int J Gynaecol Obstet. 1987 Dec; 25(6):437-40.
- Emergency Postpartum Hysterectomy in Obstetric Practice YAMAMOTO H, SAGAE S, NISHIKAWA S, KUDO R J ObstetGynaecol Res VOL.26;NO.5;PAGE.341-345(2000).
- Emergency Peripartum Hysterectomy: A Comparison of Cesarean and Postpartum Hysterectomy - FatuForna, Annette M Miles,

- Denise J Jamieson American Journal of Obstetrics and Gynecology, Volume 190, Issue 5, May 2004, Pages 1440-1444.
23. Emergency Postpartum Hysterectomy in women with Placenta Previa and prior Cesarean Section - N. Yaegashi, A. Chiba-Sekii, K. Okamura International Journal of Gynecology and Obstetrics, Volume 68, Issue 1, 1 January 2000, Pages 49-52.
24. Preventable postpartum hysterectomy - A weekend procedure? - S. Nastasia, M. Russu, S. Butuc, A. Murariu, C. Posea, D. Hudita International Journal of Gynecology and Obstetrics, Volume 107, Supplement 2, October 2009, Page S283.
25. Cesarean and Postpartum Hysterectomy - B. Chanrachakul, K. Chaturachinda, W. Phuapradit and R. Roungsipragarn International Journal of Gynecology and Obstetrics - Volume 54, Issue 2, August 1996, Pages 109-113.
-
-
-