

DOI: <http://dx.doi.org/10.18203/2320-1770.ijrcog20163551>

Original Research Article

A retrospective study of emergency obstetric hysterectomy in a tertiary care center for a period of 5 years

Bhawna Sharma*, Namrata Saxena, Vineeta Gupta

Department of Obstetrics and Gynecology, Shri Guru Ram Rai Institute of Medical and Health Sciences, Patel Nagar, Dehradun, Uttarakhand, India

Received: 09 September 2016

Accepted: 10 October 2016

***Correspondence:**

Dr. Bhawna Sharma,

E-mail: bsbhawna@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: The study was conducted to determine the frequency, demographic characteristics, indication and fetomaternal outcome associated with emergency obstetric hysterectomy in a tertiary care center.

Methods: Thirty cases of emergency obstetric hysterectomy performed during the five-year period from April 2011 to April 2016 were analyzed in the dept. of Gynae and obs. in Shri Guru Ram Rai Institute of Medical Sciences in Dehradun.

Results: During the study period there were 30 cases of obstetric hysterectomy out of 8084 deliveries giving an incidence of 0.37%. Majority of the patients (60%) were unbooked and were in the age group of 26-30 (43.3%). Common parity group were 3, 4 and 5. Morbid adherent placenta was the most common indication contributing to 40% of the cases. There were four maternal deaths in the study. All were unbooked and three of them died of hypovolemic shock with cardiopulmonary arrest and one died of septicemia. Whereas there were 60% perinatal mortality and 26.66% NICU admissions.

Conclusions: Emergency obstetric hysterectomy is a potentially lifesaving procedure which often puts obstetrician in dilemma at the time of decision making.

Keywords: Emergency obstetric hysterectomy (EOH), Morbid adherent placenta, Hypovolemic shock, Cardiopulmonary arrest

INTRODUCTION

Obstetric hysterectomy was originally devised more than 200 years ago as a surgical attempt to manage life threatening obstetric hemorrhage and infection. It has a definitive role in developing countries where the advanced modalities like uterine artery embolization to prevent PPH is not easily available. The decision is made when the condition of the patient is too critical.

Conservative methods like misoprostol, oxytocin drip, condom catheter balloon and no inflatable anti shock garment for the management of hypovolemic shock have all been advocated to manage obstetric hemorrhage effectively in low resource settings.¹ On the other hand

advance modalities like uterine artery embolization in intervention radiology has also been demonstrated to prevent severe PPH. But sometimes in life threatening condition emergency obstetric hysterectomy remains the main stay of management of massive haemorrhage.^{2,3}

Similarly, in spite of advancement in obstetrics, dais handling of obstructed labour and its complications are quite prevalent in rural India. So to prevent massive hemorrhage in rupture uterus, many times emergency obstetric hysterectomy is considered as the definitive management. We aimed to evaluate the incidence, indication, and fetomaternal complication associated with emergency obstetric hysterectomy in a tertiary care center.

METHODS

This was a retrospective, observational, analytic study of all parturient women required EOH over a period of 5 years from April 2011-April 2016 from the department of Gynae and obs., Shri Guru Ram Rai Institute of Medical Sciences, Dehradun, Uttarakhand.

We included all the women delivered in the hospital in the mentioned period, after 24 weeks of gestation, who underwent hysterectomy at the time of delivery or subsequently within the defined period of puerperium (42 days). The women who delivered outside the hospital and were referred for obstetric complications meriting a hysterectomy and fulfilling all the above conditions were also included in the study. Women who delivered before 24 weeks of gestation, undergoing hysterectomy for indications other than obstetric or after 42 weeks of gestation were excluded from the study. The data of the incidence, indication, demography, and foeto maternal complications were collected and analyzed from the hospital medical records.

RESULTS

Table 1: Incidence of emergency obstetric hysterectomy (EOH).

| Statistical data | Number |
|----------------------|--------|
| Number of deliveries | 8084 |
| Number of LSCS | 2514 |
| Number of EOH | 30 |
| Incidence of EOH | 0.37% |

There were 30 cases of emergency obstetric hysterectomy amongst 8084 deliveries over a period of 5 year giving the incidence of 0.37%. (Table 1 and Table 2 show the reported incidences.)

Majority of the patients were in the age group of 26-30 (43.33%). Only 1 was primipara, rest all were multiparous (Table 3).

Morbidly adherent placenta was the most common indication for EOH accounting for 40% of the cases (12/30) and all were booked. Among 12 cases 8 had more than one factor i.e. previous LSCS with placenta Previa and 4 had only placenta Previa. Second most common indication was rupture uterus which was presented in 10 among 30 subjects (33.33%). Among 10 patients 7 were having previous scarred uterus and in 3 obstructed labour was the cause. Eight out of thirty patients had atonic PPH (26.66%) and all of them were unbooked (Table 4).

Table 2: Reported incidence of obstetric hysterectomy.

| Author | Incidence |
|---|-----------|
| Mesleh et al ⁴ | 0.03% |
| Bakshi and meyer (2002) ⁵ | 0.27% |
| Kastner et al (2002) ⁶ | 0.14% |
| Mukherjee et al (2002) ⁷ | 0.15% |
| Sheiner et al ⁸ | 0.048% |
| Basket (2003) ⁹ | 0.53% |
| Parneshwari devi et al (2004) ¹⁰ | 0.07% |
| Sahu et al (2004) ¹¹ | 0.20% |
| Kwee et al (2005) ¹² | 0.03% |
| Kant and Wadhvani (2005) ¹³ | 0.26% |
| Parveen et al ¹⁴ | 0.31% |
| Present study | 0.37% |

Table 3: Distribution of cases by age and parity.

| Age (Yrs) | Parity | | | | | | Total |
|-----------|--------|---|---|---|---|----|-------|
| | 1 | 2 | 3 | 4 | 5 | >5 | |
| 20-25 | 1 | - | 1 | - | 1 | - | 3 |
| 26-30 | - | 5 | 3 | 5 | - | - | 13 |
| 31-35 | - | 2 | 2 | 2 | - | 3 | 9 |
| 36-40 | - | - | 1 | - | 4 | - | 5 |
| Total | 1 | 7 | 7 | 7 | 5 | 3 | 30 |

Table 4: Reported indications.

| | Gupta and Ganesh (1994) ¹⁵ | Mukherjee et al (2002) ⁷ | Kastner et al (2002) ⁶ | Basket et al (2003) ⁹ | Sahu et al (2004) ¹¹ | Praneshwari Devi et al (2004) ¹⁰ | Kwee et al (2005) ¹² | Kant and Wadhvani et al (2005) ¹³ | Praveen et al (2005) ¹⁴ | Present study (2016) |
|-------------------------------|---------------------------------------|-------------------------------------|-----------------------------------|----------------------------------|---------------------------------|---|---------------------------------|--|------------------------------------|----------------------|
| Rupture uterus | - | 38.3% | - | - | 38.8% | 23% | - | 36.58% | 60% | 10 (33.3%) |
| Morbidly adherent placenta | - | 8.4% | 48.9% | 50% | 13.88% | 26.9% | 50% | 12.19% | 20% | 12 (40%) |
| Atonic PPH | - | 10.3% | 29.8% | 32.8% | - | 19.2% | 27% | 41.46% | 10% | 8 (26.66%) |
| Traumatic PPH | 39.4% | 6.5% | 4.3% | - | - | 7.6% | - | - | 3.3% | - |
| Pregnancy with fibroid uterus | - | 0.9% | - | - | - | - | - | - | 6.6% | - |

As far as fetomaternal complications are concerned there were four maternal mortalities. All of them were unbooked. The cause of death in 3 patients was hypovolemic shock with cardiopulmonary arrest. All the 3 had rupture uterus whereas 1 died of septicemia where hysterectomy was done for atonic PPH. 5 (16.66%) patients developed febrile morbidity, 3 (10%) had consumption coagulopathy. In 4 patients (13.33%) wound sepsis occurred. 2 had re laparotomy. In 6 patients (20%) need for vasopressor occurred. All the 18 unbooked patients (60%) had ICU admissions as they came in an unstable condition. there were 18 (60%) perinatal mortality and 8 (26.66%) NICU admissions (Table 5).

Table 5: Fetomaternal complications (n=30).

| Complications | Number | Percentage |
|----------------------|--------|------------|
| Maternal | | |
| Fever | 5 | 16.6% |
| Coagulopathy | 3 | 10% |
| Wound sepsis | 4 | 13.33% |
| Relaparotomy | 2 | 6.66% |
| Need for vasopressin | 6 | 20% |
| ICU admission | 18 | 60% |
| Mortality | 4 | 13.33% |
| Fetal | | |
| NICU admission | 8 | 26.66% |
| Mortality | 18 | 60% |

DISCUSSION

First caesarean hysterectomy was performed by Strorer in United States in 1869¹¹. Despite regular availability of contraceptives and abortion services and reduced family size world over, there has been consistent rise in the rates of caesarean attributable in the part, to the patient preferences and medicolegal implications on medical fraternity. In addition to it advances in anaesthesia, intensive care backup, availability of blood bank have made it a safer and painless alternative to labour. This has not only given rise to complications like abnormal placentation and uterine rupture, but also the incidence of PPH, giving obstetric hysterectomy more relevance in present day modern obstetric practice.

The incidence of obstetric hysterectomy in our study is 0.37%; which is comparable to the study of Praveen et al.¹⁴ Table 2 shows the reported incidence of obstetric hysterectomy. Our incidence is high as compare to other studies which is attributable to the fact that our center is a tertiary care center and most of the cases were referred.

In our study the most common indication for obstetric hysterectomy was morbid adherent placenta (40%) depicting the rising trend of caesarean sections leading to abnormal placenta and thus morbidly adherent placenta. This is consistent with the study of Kastner et al, Praneshwari et al and Basket et al where also morbidly adherent placenta is the most common indication.^{6,9,10}

Our second most common indication was rupture uterus (33.3%) as all of the patients were unbooked, referred and came in state of shock. this was also in the study of Praneshwari Devi et al.¹⁰ However, statistics reported from the other studies, Table 4 showing rupture uterus as the most common indication.

Third most common indication in our study was atonic PPH. (26.66%). All the cases were unbooked. This is similar to the study of Allahbadiya and Vadiya.¹⁶

As far as complications are concerned (Table 5), in our study approximately 18 (60%) parturient and 8 neonates went into ICU. All of them were unbooked while as in China (10), half of the patients needed ICU care. Vasopressor were needed in 6 (20%) patients which was close to the result from China.¹⁷ Barring the need for vasopressor, intra or post-operative febrile morbidity was the most common complication in our study and others.^{17,18} 3 patients landed in DIC which is close to the study of Jaya chawla where 12 % had coagulopathy.¹⁹ Only 2 patients had re laparotomy in our study to arrest hemorrhage where as in the study of Jaya 3.6% patients had re laparotomy.

There are 4 (13.33%) mortality in our study, where 2 patients died of hemorrhagic shock with ARF, one of cardiopulmonary arrest and one of septicemia. All of them were unbooked and reached hospital in a state of shock, while 10 % of maternal deaths were reported by others.^{8,12,13}

CONCLUSION

Emergency obstetric hysterectomy is a necessary evil in obstetrics. This is a situation when surgeon is in dilemma as in one hand it curtails the future child bearing potential of the woman, on the other hand save the mother in life threatening condition. Most of the morbidity is attributable to its indication and underlying disorder rather than the procedure itself. The incidence of its surgery can be checked by good antenatal care, active management of labour, early recognition of complications and only indicated performance of caesarean sections as the irony is in one hand timely caesarean section in case of obstructed labour can prevent rupture uterus, which otherwise requires obstetric hysterectomy where as in other hand unnecessary caesarean section in a primi gravida can lead to morbidly adherent placenta, which also requires obstetric hysterectomy.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Miller S, Lester F, Hensleigh P. Prevention and treatment of postpartum hemorrhage: new advances for low- resource settings. *J Midwifery Womens Health.* 2004;49(4):283-92.
2. Singhal S, Singh A, Raghunandan C, Gupta U, Dutt S. Uterine artery embolization: exploring new dimensions in obstetric emergencies. *Oman Med J.* 2014 May;29(3):217-9.
3. Varghese S, Gokulam N, Al- Abri S. Uterine Artery Embolization in Postpartum Hemorrhage: A Case Report. *Oman Med J.* 2012 Jul;27(2).
4. Mesleh R, Ayoub H, Algwiser A. Emergency peri partum hysterectomy. *J Obstet Gynaecol* 1998;18:533-7.
5. Bakshi S, Meyer BA. Indications for and outcomes of emergency peri partum hysterectomy. A five year study review. *J Reprod Med.* 2000;45:733-7.
6. Kastner ES, Figueroa R, Garry D. Emergency peri partum hysterectomy: experience at a community teaching hospital. *Obstet Gynaecol India.* 2002;52:34-6.
7. Mukherjee P, Mukherjee G, Das C. Obstetric hysterectomy-A review of 107 cases *J Obstet Gynaecol India.* 2002;52:34-6.
8. Sheiner E, Levy A, Katz M. Identifying risk factors for peripartum caeseraen hysterectomy. A population based study. *J Reprod Med.* 2003;48:622-6.
9. Baskett TF. Emergency obstetric hysterectomy. *J Obstet Gynaecol.* 2003;23:353-5.
10. Praneshwari Devi RK, Singh NN, Singh D. Emergency obstetric hystrectomy. *J Obstet Gynaecol India.* 2004;54:343-5.
11. Sahu L, Chakravertty B, Panda S. Hysterectomy for obstetric emergencies. *J Obstet Gynaecol India.* 2004;54:34-6.
12. Kwee A, Bots ML, Visser GH. Emergency peri partum hysterectomy. A prospective study in the Netherlands. *Eur J Obstet Gynaecol ReprodBioi* 2006;124:187-92.
13. Kant A, Wadhvani K. Emergency obstetric hysterectomy. *J Obstet Gynaecol India.* 2005;55:132-34.
14. Praveen. Peripartum hysterectomy-A Five year study. *J Obstet gynecol India.* 2008;58:504-6.
15. Gupta U, Ganesh K. Emergency hysterectomy in obstetrics: review of 15 years. *Asia Oceania J Obstet Gynecol.* 1994;20:1-5.
16. Allahbadiya GV, Vaidya P. Obstetric Hysterectomy (A review of 50 cases from January 1987 to august 1990) *J Obstet Gynaecol Ind.* 1991;41:634-7.
17. Pradhan M, Yong S. Emergency Peripartum Hysterectomy as Postpartum Hemorrhage Treatment: Incidence, Risk factors, and Complications. *Journal of Nepal Medical Association.* 2014;52(193):668-76.
18. Juneja SK, Tandon P, Mohan B, Kaushal S. A change in the management of intractable obstetrical hemorrhage over 15 years in a tertiary care center. *Int J Appl Basic Med Res.* 2014 Sep;4(1):S17-S19.
19. Chawla J, Arora D. Emergency obstetric hysterectomy: A retrospective study from a teaching hospital in North India over eight years. *Oman medical journal.* 2015;30(3):181-6.

Cite this article as: Sharma B, Saxena N, Gupta V. A retrospective study of emergency obstetric hysterectomy in a tertiary care center for a period of 5 years. *Int J Reprod Contracept Obstet Gynecol* 2016;5:3778-81.