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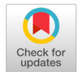
Original Research Article

A study of frequency, indication and maternal outcome in emergency peripartum hysterectomy in a tertiary care hospital

Bharathi R[1,*], **Jayabharathi R**[2]

[1]*Dept. of Obstetrics and Gynecology, Government Medical College and Hospital, Kallakurichi, Tamil Nadu, India*
[2]*MGR University, Tamil Nadu, India*



A R T I C L E I N F O

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A B S T R A C T

Background: Antepartum and postpartum haemorrhage are life threatening condition. Obstetric haemorrhage often ends with Peripartum hysterectomy which is done to save the mother if medical and conservative surgical management fails. This study was done to analyse the frequency, indications and associated complications of peripartum hysterectomy.
Materials and Methods: This retrospective study is conducted in the Department of Obstetrics and Gynecology, Government Medical College Hospital, Kallakurichi, Tamil Nadu, over a period of one year from March 2021 to February 2022.
Results: Total mothers delivered during the study period was 8174. Emergency peripartum hysterectomy was performed in 28 women. Incidence of peripartum hysterectomy is 3.42/1000 deliveries (0.34%). Most were in the age group of 21-30 years. Majority of patients were multigravida. Most common cause for peripartum hysterectomy was atonic postpartum haemorrhage. Most common postoperative complication was post operative febrile illness.
Conclusions: Peripartum Hysterectomy for control of obstetric haemorrhage is a lifesaving procedure, However it is usually associated with significant morbidity and mortality. This can be reduced by effective antenatal care, tracking of high risk mothers and reduction of primary caesarean delivery as it has significant impact women's child bearing and reproductive life.

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1. Introduction

First emergency peripartum hysterectomy was done in 1876 by Porro for Atonic PPH following caesarean section. Peripartum hysterectomy includes caesarean hysterectomy and postpartum hysterectomy following vaginal delivery is estimated to be 0.25 -0.89 per 1000.[1] The risk of Emergency peripartum hysterectomy is almost 5-10 times greater after caesarean section than following vaginal birth.[2] Most common indications for peripartum hysterectomy are postpartum hemorrhage, uterine rupture, placenta accreta and sepsis.[3] There has been increased incidence of abnormal placentation and placenta previa in recent times due to increase in caesarean delivery over past two decades.[4]

2. Materials and Methods

This retrospective study was conducted in the department of obstetrics and gynecology, Government Medical College Hospital, Kallakurichi. All cases of Emergency peripartum hysterectomy done for various indications during pregnancy, labour, puerperium and post abortion over a period of one year from March 2021 to February 2022 were taken up for analysis. Peripartum hysterectomy is done in cases where bilateral uterine artery ligation,

* *Corresponding author*.
E-mail address: pradinatarajan@gmail.com (Bharathi R).

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bilateral ovarian vessel ligation and B-lynch sutures failed to control postpartum hemorrhage. Maternal characteristics, indication for hysterectomy, type of hysterectomy and postoperative complications were analysed.

3. Results

Total mothers delivered during the study period were 8174. Emergency peripartum hysterectomy was performed in 28 women. Incidence of peripartum hysterectomy is 3.42/1000 deliveries (0.34%).

Table 1: Age wise distribution of patients

Age group (years)	No.of patients	Percentage
< 20	4	14.3%
21-25	9	32.1%
26-30	12	42.9%
30-35	3	10.7%

42.9% of women were in the age group of 26-30 years. 32.1% were in the age group of 21-25 years. 14.3% were less than 20 years of ages and 10% were above 30 years of age.

Table 2: Parity wise distribution of patients

Gravida Index	No.of patients	Percentage
G1	7	25%
G2	8	28.6%
G3	9	32.1%
G4 and above	4	14.3%

Gravida 3 constituted of about 32.1%, 28.6% were Gravida 2 and 25% were primigravida, others were Dravida 4 and above. Multi gravida constituted 75% of total peripartum hysterectomy cases while 25% were primigravida.

Table 3: Distribution of patients according to mode of previous delivery in multigravida

Mode of previous delivery	No.of patients	Percentage
Previous vaginal delivery	11	52.4%
Previous 1 CS	8	38.1%
Previous 2 CS	2	9.5%

Among multigravida 52.4% had previous vaginal delivery, 38.1% had previous one caesarean section and 9.5% had previous two caesarean section.

3.1. *Incidence of antepartum haemorrhage*

Antepartum hemorrhage was documented in 12 cases who underwent peripartum hysterectomy.

Abruptio placenta and placenta previa constituted of about 42.8% of total Peripartum hysterectomy cases.

Table 4: Antepartum hemorrhage

APH	No. of patients	Percentage
Abruption	6	21.4%
Placenta previa	6	21.4%
Total	12	42.8%

Table 5: Type of placenta previa

Type	Number
Type 2	1
Type 3	3
Type 4	2

Among the placenta previa one case was type 2 anterior, 3 were type 3 and one case was central placenta previa.

Table 6: Mode of present pregnancy outcome

Mode of delivery of present pregnancy	No.of patients	Percentage
Vaginal delivery	8	28.6%
Caesarean section	17	60.7%
Second trimester abortion	2	7.1%
Hysterotomy	1	3.6%

Mode of delivery in present pregnancy among peripartum hysterectomy cases was caesarean section in 60.7% of cases, 28.6% had vaginal delivery and 10.7% had second trimester abortion.

Table 7: Indication for peripartum hysterectomy

Indication	Number of patients	Percentage
Atonic PPH	21	75%
Placenta accrete	4	14.3%
Abruptio placenta	2	7.1%
Secondary PPH	1	3.6%

75% of peripartum hysterectomy were done for Atonic PPH. 14.3% cases were done for placenta accrete and 7.1% were adherent placenta, only one case had secondary pph following abortion and done hysterectomy.

Table 8: Type of hysterectomy

Type of hysterectomy	No. of patients	Percentage
Subtotal hysterectomy	22	78.6%
Total hysterectomy	6	21.4%

All cases of atonic PPH and secondary PPH underwent subtotal hysterectomy constituting 78.6% cases while all others with placenta previa were done total hysterectomy which constitutes of about 21.4%.

Postoperatively one patient required elective ventilation for 24 hours and extubated later. Also, one patient had postoperative abdominal distension with collection of blood in drain, for whom Relaparotomy was done and bleeding

Table 9: Post-operative complications

Post-operative complications	No.of patients	Percentage
Requiring ventilator support	1	3.6%
Relaparotomy	1	3.6%
Post operative febrile illness	6	21.4%
Paralytic ileus	5	17.8%
Pneumonitis	4	14.3%
Wound infection	2	7.1%

secured. 6 patients (21.4%) had postoperative febrile illness. All recovered with escalation of antibiotics, adequate hydration and antipyretics. 17.8% had postoperative paralytic ileus and were managed conservatively and all recovered. 14.3% of cases had pneumonitis and required nebulisation, oxygen support in postoperative period. Almost all cases received sufficient blood transfusion with PRBC, FFP and platelets in the perioperative period. Peripartum hysterectomy is associated with significant maternal morbidity and mortality. In this study there was no maternal mortality.

Table 10: Gestational age of present pregnancy

Period of G estation	No. of patients	Percentage
Term	21	75%
Pre term (32-36 weeks)	4	14.3%
second trimester	3	10.7%

75% of the patients who underwent peripartum hysterectomy had term pregnancy while 14.3% were preterm and 10.7% had 2nd trimester abortion.

4. Discussion

Total mothers delivered during the study period were 8174. Emergency peripartum hysterectomy was performed in 28 women. In this study Emergency peripartum hysterectomy rate was 0.34% which is higher than the study by Archana et al[5] from Chennai which showed 0.12% and similar to the study by Bhaskaran et al.[6]

The most common age group was between 21-30 years accounting for about 75% of total cases. This is similar to study by Garg Pratibha et al.[7] from Gwalior which accounts for about 75.8%.

In this study there is a gradual increase in peripartum hysterectomy with increase in gravidity index which is similar to study by Jou HJ et al.[8]

Mode of previous delivery in multi gravida was vaginal delivery accounting about 52.3% and 47.6% had previous caesarean section in our study. This is corresponding with study by Dilpreet et al[9] from Chandigarh which showed 46.3% of cases with previous scarred uterus.

Most common mode of delivery in the present pregnancy is by caesarean section in about 17 cases accounting 60.7% who underwent caesarean hysterectomy. This was correspondence with study by Garg et al[7] which also showed high incidence of hysterectomy with caesarean delivery of about 86.35%.

Most common indication for hysterectomy was atonic PPH of about 75% (21 cases) in this study. This is similar to study by Bhaskaran et al[6] which also showed atonic PPH as most common indication of about 59.8%. The second most indication was placental cause accounting for 14.3%. This is also similar to study by Baskaran et al[6] which showed 19.5%. This has been increasing now a days due to increase in primary caesarean section rates. This has been supported from the study by Kastner et al.[10] which showed accreta was the most common indication for hysterectomy.

Period of gestation at the time of hysterectomy was term in 75% of cases in this study, which is similar to study by Dilpreet et al[9] which showed 58.54% and preterm deliveries were 14.3% in our study while it was 26.83% in the study by Dilpreet et al.[9]

In our study abruption with PPH was found in 21.4% of cases. This is mainly due to late presentation of cases with couvelaire changes, whereas study by Archana et al[5] showed only 7%. Most common complication in the postoperative period was febrile illness 21% of cases which is similar to study by Garg et al[7] which showed 20.7% with febrile illness as most common morbidity. Second most common complication was paralytic ileus was noted in 17.8% of cases in our study which is also close to study by Archana et al[5] which was 21.4%.

5. Conclusion

Emergency peripartum hysterectomy is done for saving mothers life in cases of obstetric hemorrhage with lot of dilemma as ones reproductive capability is sacrificed. Also, it is associated with significant maternal morbidity and mortality. Increase in primary caesarean section recently has been identified as one of the most important cause for placenta previa and accreta complex. So there comes the necessity to reduce primary caesarean section along with effective antenatal care, early identification of high risk mothers and active management of third stage of labour to reduce antepartum and postpartum hemorrhage and hence emergency peripartum hysterectomy.

6. Source of Funding

None.

7. Conflict of Interest

None.

References

1. Ozden G, Yildirim G, Basaran T, Gurbuz B, Dayicioglu V. Analysis of 59 cases of emergency hysterectomies during 13 year period. *Arch Gynecol Obstet*. 2005;271(4):363–7.

2. Bai SW, Lee HJ, Cho JS, Cho JS, Park YW, Kim SK, et al. Peripartum hysterectomy and associated factors. *J Reprod Med*. 2003;48(3):148–52.
3. Kwee A, Bots ML, Visser GH, Bruinse HW. Emergency peripartum hysterectomy ; A prospective study in the Netherlands. *Eur J Obstet Gyneco Report Bio*. 2006;124(2):187–92.
4. Zelop CM, Harlow BL, Friigoletto FD, Safon LE, Saltzman DH. Emergency peripartum hysterectomy. *Am J Obstet Gynecol*. 1993;168(5):1443–8.
5. Archana S, Syamala O. Obstetric hysterectomy An analysis. *Indian J Obstet Gynecol Res*. 2018;5:563–6.
6. Bhaskaran JJ, Sengodan SS, Rangesh A, Murugesan P. A study of emergency peripartum hysterectomy in a tertiary care hospital. *Int J Reprod Contracept Obstet Gynecol*. 2018;7(5):1934–7.
7. Garg P, Gandhi P. A Retrospective Study of Obstetric Hysterectomy in a Tertiary Care Hospital. 2018;6(5):1027–31.
8. Jou HJ, Hung HW, Ling PY, Chen SM, Wu SC. Peripartum hysterectomy in Taiwan. *Int J Gynaecol Obstet*. 2008;101(3):269–72.
9. Pandher DK, Sehgal A, Aggarwal N. Frequency, Indications and Maternal Outcome in Obstetric Hysterectomy in a Tertiary Care Centre in India. *Nupur Agarwal JK science*. 2015;17(1):8–12.
10. Kastner FS, Figuiroa R, Gary D, Maulik D. Emergency Peripartum Hysterectomy: Experience at community Teaching Hospital. *Obstet Gynecol*. 2002;99(6):975–5.

Author biography

Bharathi R, Associate Professor https://orcid.org/0000-0001-5702-8272

Jayabharathi R, Assistant Professor

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