www.jmscr.igmpublication.org
Impact Factor (SJIF): 6.379
Index Copernicus Value: 71.58
ISSN (e)-2347-176x ISSN (p) 2455-0450
crossref DOI: https://dx.doi.org/10.18535/jmscr/v6i6.16

IGM Publication
Journal Of Medical Science And Clinical Research
An Official Publication Of IGM Publication

Post-Partum Hemorrhage- What is the Vital Back up in a Government Tertiary Care Institution

Authors
Dr Divya Yadav[1] Prof. Shikha Singh[2], Dr Rekha Rani[3], Dr Ragini Singh[4]
[1]Assistant Professor, Department of Obstetrics & Gyaecology, Sarojini Naidu Medical College Agra, UP
[2]Professor, Department Of Obstetrics & Gyaecology, Sarojini Naidu Medical College Agra, UP
[3]Associate Professor, Department of Obstetrics & Gyaecology, Sarojini Naidu Medical College Agra, UP
[4]Junior Resident, Department of Obstetrics & Gyaecology, Sarojini Naidu Medical College Agra, UP, India

Introduction

Severe Obstetric hemorrhage is the most dreaded obstetric emergency. The most common type of obstetric hemorrhage is post-partum hemorrhage (PPH). PPH remains a foremost cause of maternal mortality and morbidity worldwide.PPH occurs in 5% of all deliveries, majorities of death occur within four hours of delivery indicating that it is a consequence of the third stage of labour[1]. Further, It's a major challenge in developing countries with a projected mortality rate of 140,000 annually or one death every four minutes[2]. WHO estimates 5,29,000 maternal deaths every year, India contributes to 25.7% of worldwide maternal mortality (1,36,000 maternal deaths/year). Two third of these maternal deaths occur post-delivery, PPH is the most frequently stated complication[3] and occurs generally without any warning signs or symptoms and commonly not associated with predisposing factors. The common causes of PPH are uterine atony, retained placenta, and trauma. Placental Anomalies, Abruptio placentae, and uterine rupture are less common but frequently accountable for severe PPH with acquired coagulopathy. The inadmissibly high maternal mortality of 540 per 100,000 live births in India in past decades remains a major challenge[3]. Most of the time, these deaths due to obstetric hemorrhage are preventable[4,5]. An understanding of the size of the problem, associated risk factors and consequence of PPH would help to improve both preventive and curative healthcare services. This retrospective cohort study is intended to identify the prevalence, associated risk factors and outcomes of various treatment strategies to manage PPH in an Indian tertiary Healthcare Centre.

Study Design & Methods

This retrospective observational study was conducted in the department of Obstetrics and Gynaecology, S.N. Medical college Agra to observe the causes of PPH, medical interventions and their outcome in patients delivered in our institution and those referred from outside. All cases of primary PPH whether delivered in our institution and referred from outside over one year period (from November'2015 to November'2016) were included in the study. Inclusion criteria of

10% decrease in haematocrit and deterioration of general condition (especially hemodynamic parameters) were taken into account to define patient of PPH. Their detailed history, clinical examination findings, management details, and outcomes related data were collected.

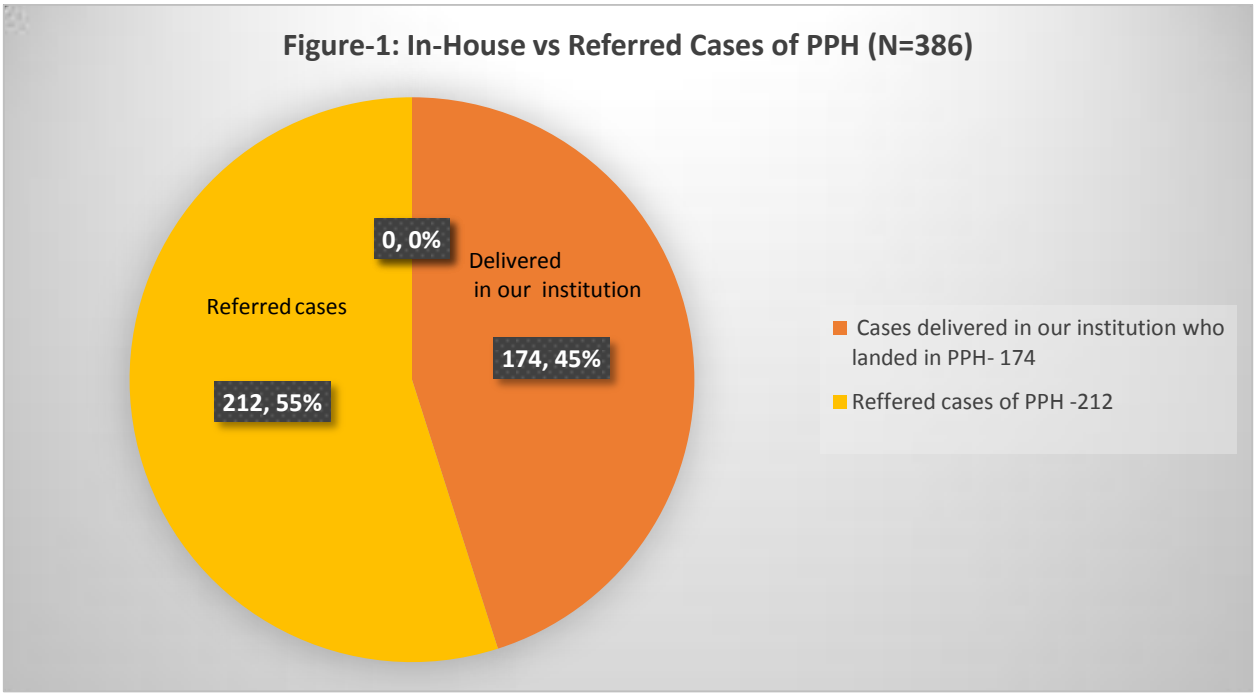
Results

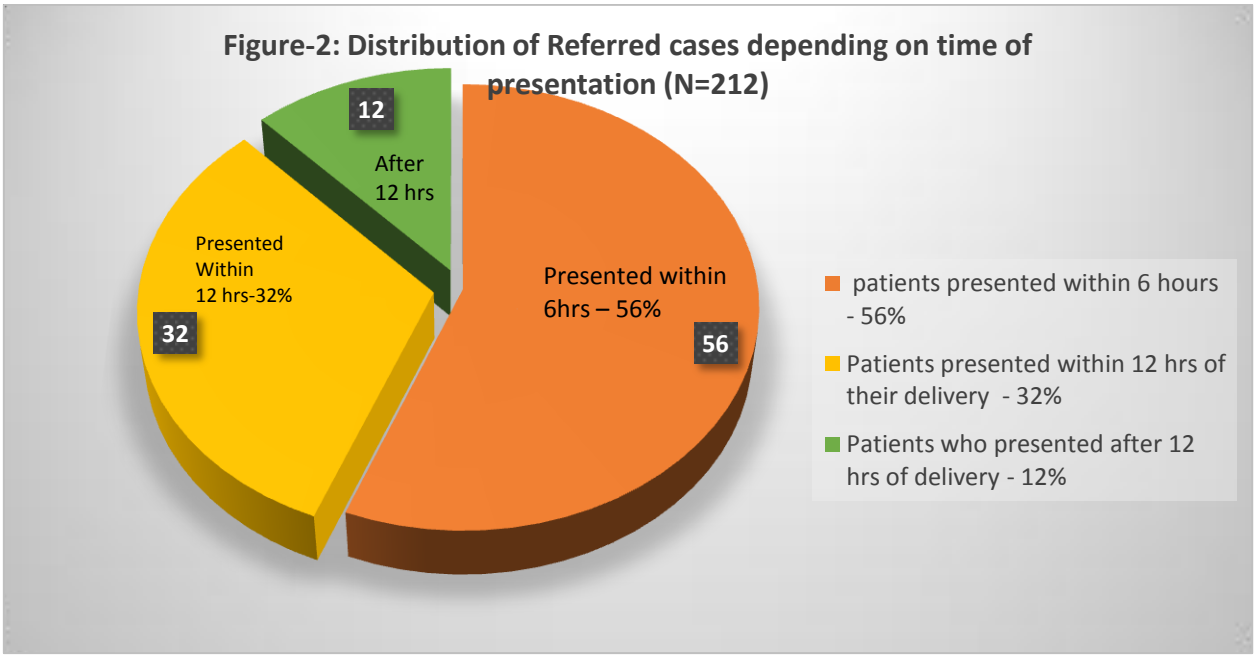
The atonic uterus is observed to be the most common cause of PPH (60%) followed by Genital Tract Trauma (23%). Placental abnormalities account for only 16% of the PPH and coagulopathies even rarely (1%) contributes to PPH. (Figure-3)

Majority of the PPH cases (60%) managed with Medical Interventions (Medicine, fundal Massage, and supportive therapy) rest required surgical interventions. Out of 155 patients with PPH who needed an invasive procedure/surgical intervention, a good number of patients were managed with simple interventions like Balloon Tamponade (30%), Repair of cervical & Vaginal tears (34%), Removal of Placenta & its Bits (25%) and more than 50% of the patients required Compression Sutures and Uterine & Ovarian artery ligation. Rarely patients needed Internal Iliac ligation (7 patients; 5%) and Hysterectomy (11 patients; 7%). ICU admission also needed for only a minority of patients and most of the patients survived in ICU (only 3 deaths). (Table-1)

Morbidly adherent placenta observed as the most common cause (63%) among patients who needed a hysterectomy. (Table-2) Most common cause of PPH associated with mortality was Morbidly Adherent Placenta (65%) as well. (Figure-5)

Maternal mortality was higher in referred patients as most of the patients (7 out of 9 who died) presented with severe shock. (Figure-4)





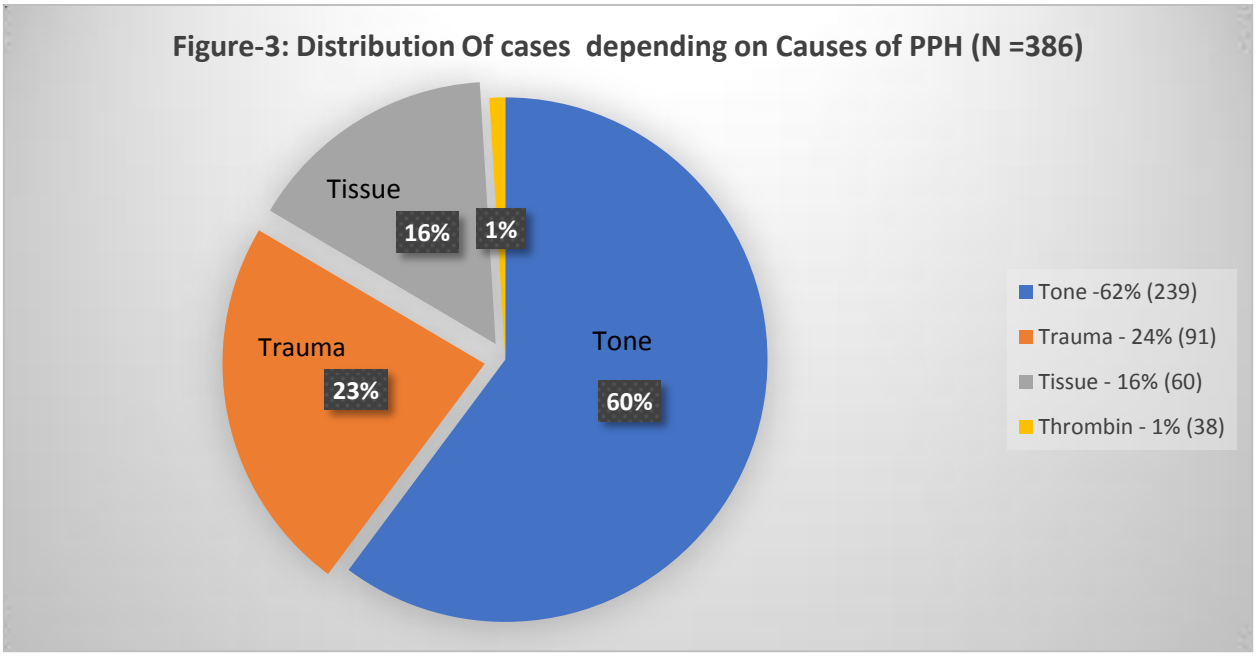


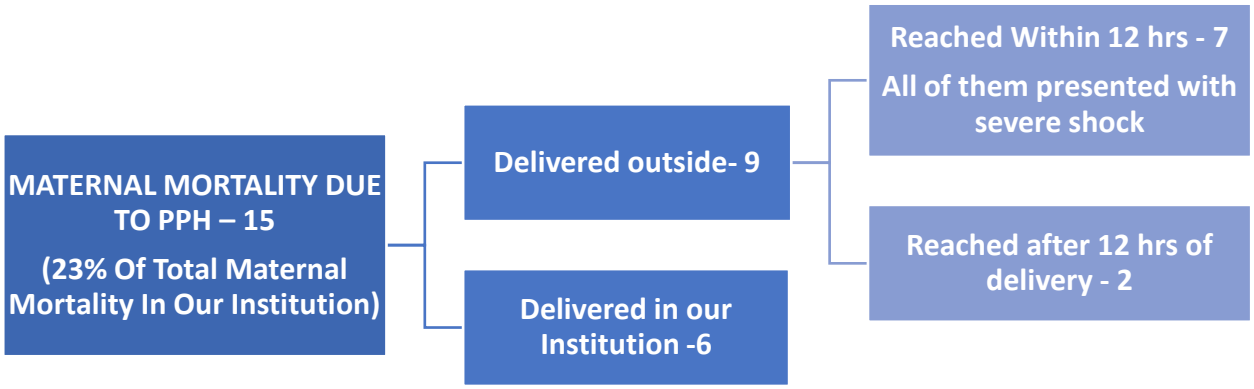
Table-1: Distribution of cases based on Management of PPH (n=386)

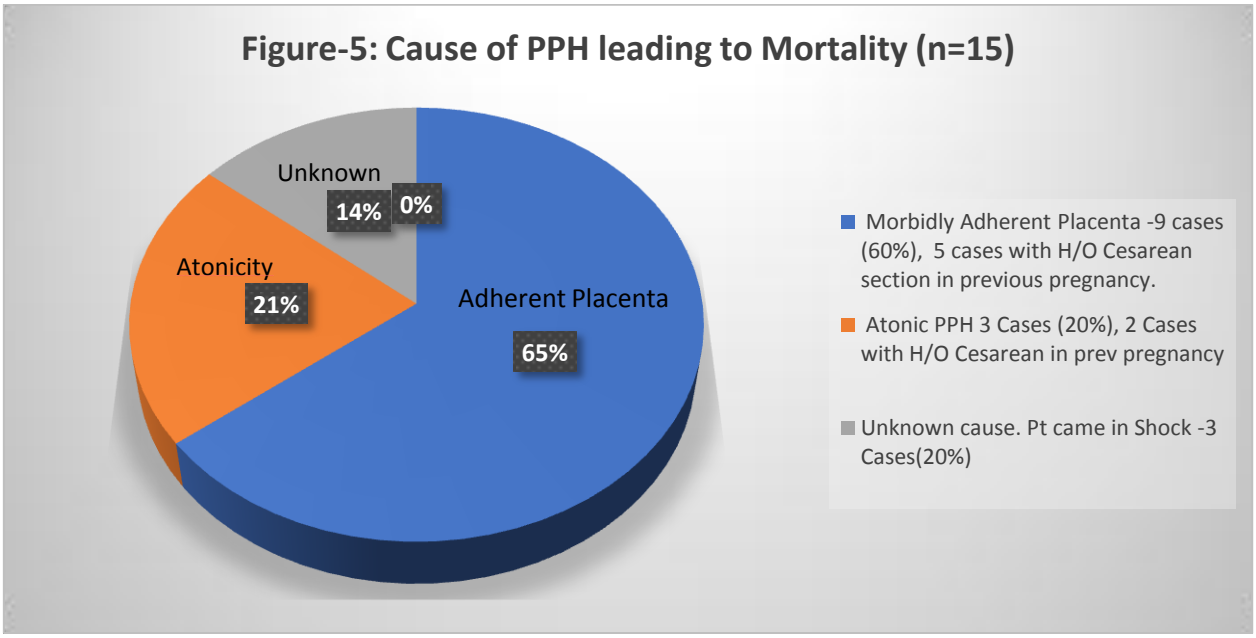
Intervention	Number of patients (%)
A. MEDICAL MANAGEMENT (Medical Rx + Fundal Massage)	**261 (60%)**
B. SURGICAL MANAGEMENT	**155 (40%)**
• **Repair of cervical& Vaginal tears**	53 (34%)
• **Balloon Tamponade**	46 (30%)
• **Removal of Placenta & its Bits**	38 (25%)
• **Compression Sutures**	91 (60%)
• **Uterine & Ovarian artery ligation**	76 (50%)
• **Internal Iliac ligation**	7 (5%)
• **Repair of Uterine rent in a Post-Partum uterine rupture in case of VBAC**	1 (0.6%)
• **Hysterectomy**	11 (7%)
C. Number of ICU Admissions	14 (3.6%) 11 (Survived) 3 (Died)

Table-2: Indications of Hysterectomies in PPH (n=11)

Indication	Number of Patients (%)	Details
A. Morbidly Adherent Placenta	**7(63%)**	**5 Patients with prev 1 LSCS; 2 Patients with prev 2 LSCS**
B. Atonicity	2 (18%)	1 -the failure of Balloon Tamponade; 1 - the failure of compression sutures
C. **Placenta Praevia**	2 (18%)	Medical Rx,compression sutures and stepwise devascularisation tried

Figure-4: Mortality-Referred vs In-house





Discussion

- Out of total 386 cases of PPH, 55% are referred and 45% are In-house, though it seems PPH is less prevalent in patients delivered in our tertiary care center but it's difficult to comment on based on that as might be only cases complicated with PPH usually referred to higher centers. Similarly, it would be inappropriate to conclude that PPH rates are higher in tertiary care center as mostly complicated pregnancies are dealt in tertiary centers, that can confound the results.
- Prevalence of PPH in our Institution was 8% which is accordance with WHO - 4-6%.[6] According to recent data published in ACOG Bulletin[7] Atonicity appears to be the most common cause of PPH(70-80%) in this study also atonicity stand out as the most common aetiology of PPH (60%).
- Maternal mortality in this study accounts to PPH is 23% which is in accordance with a

recently published Indian study (21%)[8] and Morbidly Adherent Placenta identified as the most common cause of intractable PPH leading to hysterectomy and mortality.[9]

- Above findings suggests that the management of PPH does not warrant a state of the art hospital facility. Whilst it requires awareness and correction of predisposing factors, like avoiding unnecessary cesaerean sections. The incidence of all types of placenta accreta is growing mostly associated with pregnancy with prior cesarean deliveries.
- As most common aetiology is Atonic Uterus, prevention of uterine atony by the active and appropriate management of 3rd stage of labour can avoid the most common cause of PPH. In post-delivery as well an appropriate 'Golden Hour' management of PPH can prevent mortalities/severe shock as we can see in this study most of the maternal mortality in referred patients were due to severe shock who arrived 12 hours after it sets in.[10]
- The morbidly adherent placenta should be anticipated and diagnosed beforehand in Women with the low-lying placenta and with previous cesarean sections.
- Managing PPH with clinical judgement and timely medical and surgical interventions, Availability of PPH tray containing uterine ecbolics and necessary items for uterine and vaginal tamponade, compression sutures and vessel ligation besides the obstetric operating theatre, Appropriate laboratory, emergency USG facility and Adequate ICU back up along with trained and experienced paramedical staff can play a crucial role in saving mothers.

Conclusion

PPH is a major cause of maternal mortality attributing 23% of deaths in pregnancies in Indian perspective. Majority of the cases of PPH are preventable or manageable as atonic uterus and trauma of genital tract consist 83% of all cause of PPH. Morbidly Adherent Placenta is the most common cause of PPH associated with mortality and need of hysterectomy but fortunately its less common.

References

1. Reyders FC, Seuten L, Tjalma W, Jacquemyn Y. Postpartum haemorrhage practical approach to a life-threatening complication. ClinExpObstet Gynecol. 2006; 33:81-84.
2. Abouzahr C. Global burden of maternal death and disability. Br. Med Bull. 2003;67(1):1-11.
3. Lynn P, Freedman RJ, Waldman H de Pinho, Wirth ME. Who's got the power? Transforming health systems for women and children. UN Millenium Project Task Force Child Health Maternal Health. 2005;77–95.
4. Knight M, Kenyon S, Brocklehurst P, et al.: Saving Lives, Improving Mothers' Care - Lessons learned to inform future maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2009–12. Oxford: University of Oxford, 2014.
5. Enquète Nationale Confidentiellesur les Morts Maternelles, France 2007–2009. Rapport du Comité National d'expertssur la Mortalité Maternelle (CNEMM). 2013.
6. World Health Organization. World Health Organization multicountry survey on maternal and newborn health. Geneva: WHO; 2012
7. Laurence E. Shields, Dena Goffman, Aaron B. Caughey. ACOG Practice Bulletin. Clinical Managements Guidelines for Obstetricians & Gynecologists. Number 183, October 2017.
8. Chandrika S. Kodla. A study of prevalencecauses risk factors and outcome of severe obstetrics haemorrhage. Journal

of Scientific and Innovative Research 2015; 4(2): 83-87.

9. Cunningham F, Leveno K.J., Bloom S.L., Hauth J.C., Rouse D.J., Spong C.Y. Eds. F. Gary Cunningham,etal.eds. Williams Obstetrics, 23e
10. P Reddi Rani1, JASMINA BEGUM. Recent Advances in the Management of Major Postpartum Haemorrhage - A Review. Journal of Clinical and Diagnostic Research. 2017 Feb, Vol-11(2): QE01-QE05.