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RESEARCH ARTICLE

STUDY OF CLINICAL PROFILE, RISK-FACTORS AND MANAGEMENT OF POST PARTUM HAEMORRHAGE IN A TERTIARY CARE CENTRE

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Abstract

Introduction: Post-partum Haemorrhage is commonly defined as cumulative blood loss of greater than or equal to 1000ml or blood loss accompanied by signs or symptoms of hypovolemia within 24 hrs after birth process. PPH accounts for 35% of maternal deaths worldwide.

Objective: To study clinical profile, risk factors and management of Postpartum Haemorrhage in tertiary care centre.

Materials and Methods: A Prospective observational study was conducted collecting data from medical records of consenting subjects who had Postpartum Haemorrhage in a tertiary care centre over a period between September 2019 to September 2021 after ethics approval.

Results: In our study, PPH was seen higher (52.08%) in study subjects between age group of 25-30 years and in Primipara subjects. Atonic uterus was the major cause of PPH identified in 59.3% of subjects where 16.67% of subjects were effectively managed medically by Oxytocin, Misoprostol and Methergine alone. Remaining subjects required cervical/vaginal tear repair, utero-vaginal packing, uterine artery ligation and Obstetric hysterectomy. Secondary PPH was seen in 5.2% of subjects where the etiology identified was Retained products.

Conclusion: As obstetric care improves, the incidence of postpartum haemorrhage decreases and maternal deaths from it drastically reduced. Hence, a multicentric approach has to be made to deal with these complications.

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Introduction:-

Post-partum Haemorrhage is commonly defined as cumulative blood loss of greater than or equal to 1000ml or blood loss accompanied by signs or symptoms of hypovolemia within 24 hrs after birth process ⁽¹⁾. PPH accounts for 35% of maternal deaths worldwide. Incidence of PPH is reported as 2-4% after vaginal delivery and 6% after Caesarean section, with atonic uterus as a major contributing factor in 50% of cases ⁽²⁾. Key contributing factors for

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PPH in developing countries is continued preference for home delivery and lack of skilled birth attendants. Hence improving health care for women in child birth is an important goal to manage and treat PPH. Death in PPH may occur due to Delay in seeking care, delay in reaching care or delay in receiving care. Hence, timely diagnosis, appropriate resources and management plays a crucial role in reducing maternal mortality due to PPH.

Aims and Objectives:-

To study clinical profile, risk factors and management of Postpartum Haemorrhage in tertiary care centre.

Materials and Methodology:-

A Prospective observational study was conducted collecting data from medical records of consenting subjects who had Postpartum Haemorrhage in a tertiary care centre over a period between September 2019 to September 2021 after ethics approval.

Inclusion Criteria

1. Post –Partum patients who develop postpartum haemorrhage.
2. Patients Developing Atonic PPH
3. Patients with any Traumatic causes of PPH
4. Patients with Retained Placenta including all cases of Morbidly Adherent Placenta
5. Patients Developing Coagulopathy
8. Patients with Uterine Inversion
9. Patients Developing Secondary PPH

Exclusion Criteria

1. Patients with Bleeding in Ante-Natal Period (Ante-Partum Haemorrhage)
2. Patients with bleeding due to any other cause or before 3rd stage of Labour.

Detailed history and examination findings were noted in order to find out the possible cause of Postpartum Haemorrhage. Blood loss was assessed on the basis of measurement from the basins, linens, mops and sponges. In all cases necessary investigations were carried out and managed accordingly.

Results:-

During the study period, medical records were reviewed to note the baseline details like Age, Parity education and socio-economic class. The baseline details are noted in Table No 1 below:

Table No 1:- Baseline Details:

AGE IN YEARS	NO. OF CASES	PERCENTAGE (%)
19-24	30	31.25%
25-30	50	52.08%
Above 30	16	16.6%
PARITY	NO. OF CASES	PERCENTAGE (%)
Primi	35	36.4%
II	28	29.1%
III	23	23.95%
IV and above	10	10.41%
EDUCATION STATUS	NO OF CASES	PERCENTAGE(%)
Illiterate	39	40.6%
Primary	17	17.7%
Secondary	30	31.3%
Higher	10	10.41%
SOCIOECONOMIC STATUS	NO OF PATIENTS	PERCENTAGE(%)
Low	66	81.48%
Middle	15	18.5%
REGISTRATION STATUS	NO. OF CASES	PERCENTAGE (%)
Emergency	57	59.3%

Registered	39	40.6%
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As depicted in table above, the incidence of postpartum haemorrhage was maximum between age group of 25 to 30 years which are years of maximum fertility and productivity. The incidence of PPH was higher in primipara(36.4%) as compared to Multipara that is further discussed below.

Detailed medical and Obstetric history of the subjects was taken. And risk factors identified in the subjects were noted as described in Table no 2 below:

Table No 2:- Risk factors predisposing to PPH.

RISK FACTORS	PRESENT STUDY	PERCENTAGE(N=96)
Previous C Section	22	22.9%
Placenta Previa	8	8.3%
Placental Abruption	5	5.2%
Pre eclampsia	6	6.2%
Twins	2	2.1%
Polyhydramnios	1	1.04%
Anemia	6	6.2%
Multigravida	8	8.3%

In the present study, out of 96 patients predisposing risk factors for postpartum haemorrhage were observed in 58 cases(60.4%) which emphasizes the need for screening for risk factors in antenatal and intra-natal period thereby deciding appropriate place for delivery and mode of delivery.

PPH was further classified as Primary and Secondary PPH and their etiology were identified and mentioned in Table No 3 below:

Table No 3:- Etiology of PostPartum Haemorrhage.

ETIOLOGY OF PRIMARY PPH	NO. OF CASES(N=91)	PERCENTAGE (%)
Atonic PPH	57	59.3%
Traumatic PPH	23	23.9%
Retained Placenta	6	6.2%
Uterine Inversion	1	1.04%
Coagulopathy	4	4.1%
ETIOLOGY OF SECONDARY PPH	NO. OF CASES(N=5)	PERCENTAGE (%)
Retained Tissue	5	100%

In the present study cases of primary PPH in our institute were higher as compared to secondary PPH. In the present study, the most common cause leading to postpartum haemorrhage was uterine atony(59.3%) followed by the traumatic cause which includes cervical tear,vaginal tear and uterine rupture, retained products and lastly coagulation disorders.

However, secondary PPH was observed in 5 subjects where the cause found was Retained tissue.

All the cases of PPH noted were managed as per the protocol with both medical as well as surgical methods. The details of which are noted in Table no 4 below:

Table No 4:- Management of PPH.

Management of Primary PPH			
Medically Managed (n=16)	Drugs used	No of Subjects	Percentage
	Oxytocin alone	6	6.25%
	Oxytocin+Misoprostol+Methergine	10	10.41%

Surgically Managed(n=75)	Cervical/Vaginal Tear Repair	10	10.41%
	Uterine Artery Ligation	17	17.7%
	Packing (Uterine/Vaginal/Cervical)	28	29.1%
	Manual Removal Of Placenta	2	2.08%
	Compression Sutures(Comog-Mg)	1	1.04%
	Ruptured Uterus Repair(Laprotomy)	4	4.1%
	Reposition Of Uterus(Inversion)	1	1.04%
	Obstetric Hysterectomy	12	12.5%
Management of Secondary PPH			
Medically Managed(n=2)	Oxytocin + Misoprostol	2	2.08%
Surgically Managed(n=3)	Dilation And Evacuation	2	2.08%
	Obstetric Hysterectomy	1	1.04%

As mentioned in table above, 16.67% of subjects were managed medically where others required surgical management in form of cervical exploration, utero-vaginal packing, laprotomy and obstetric hysterectomy.

Discussion:-

PPH being the major cause of maternal morbidity and mortality, study regarding its risk factors and its appropriate management plays major role in planning health care policies and thereby improving quality of health care. In our study period between September 2019 to September 2021, PPH was reported in 96 subjects(8.1%) which was comparatively lower than 29% and 19% in the study conducted by Ganesh Tongde et al⁽³⁾ and Gangwar et al⁽⁴⁾ respectively.

As shown in Table No 1, Incidence of PPH was maximum(52.08%) in age group of 25-30 years. The observations were similar in study conducted by Thawal et al⁽⁵⁾ and Rajeshwari et al⁽⁶⁾. In present study, incidence of PPH was higher in primiparas than multipara as observed in study conducted by Ganesh Tongde et al⁽³⁾ and Gora K et al⁽⁷⁾. The occurrence may be higher due to uterine inertia, prolonged labour and increased operative interference. Incidence of PPH in the multipara was low due to number of multiparas itself has decreased, improvement in healthcare facilities, larger portion of women pursuing small family norms having parity no more than two children.

22.9% of our study subjects had Previous Cesarean section as a major risk factor as compared to 26.74% observed in study by Gauri et al⁽⁸⁾. Anemia was seen in 6.2% of subjects which was lower than in study conducted by Rajeshwari et al(11%)⁽⁶⁾, as majority of our study subjects were registered in their antenatal period.

In our study, the most common cause leading to postpartum haemorrhage was uterine atony(59.3%) followed by the traumatic cause which includes cervical tear, vaginal tear and uterine rupture., retained products and lastly coagulation disorders. Similar observations where, uterine atony was the major cause of PPH was seen in study conducted by Thawal et al⁽⁵⁾ and Gangwar et al⁽⁴⁾.

Among subjects with atonic PPH, 16.67% was controlled with the medical management alone that included use of Oxytocin, misoprostol and methergine. In remaining subjects, where PPH was not controlled by medical management other measures mentioned in Table No 4 were utilized.

Reposition of uterus vaginally for 2nd degree uterine inversion was done in one case.

Four cases of Rupture of uterus were noted where two cases had lateral tear, another two cases had rupture from the scar site. Obstetric Hysterectomy was performed in 12 patients(12.5%) as compared to 15.1% and 11.1% noted in study conducted by Gouri et al⁽⁸⁾ and Gangwar et al⁽⁴⁾ respectively. Out of 12 subjects where Obstetrics

Hysterectomy as done, 1 was subtotal obstetric hysterectomy while rest were total obstetric hysterectomy. Three Obstetric hysterectomy were done in primipara patients where in all other measures like packing and uterine artery ligation failed to control bleeding.

In 5 cases where secondary PPH was noted, 1 patient required obstetric hysterectomy on fifth postpartum, due to retained placental bits remained even after dilatation and evacuation procedure.

Conclusion:-

Postpartum Haemorrhage is responsible for more than thousands of death per year. Hence, considering the magnitude of problem, various cost effective measures to combat the problem are of utmost importance. As obstetric care improves, the incidence of postpartum Haemorrhage decrease and maternal deaths from it drastically reduced. Hence, a multicentric approach has to be made to deal with these complications. Since last decade, conservative surgical procedure have been successfully used in various circumstances and form. Thus, early anticipation, early intervention with proper planning is required to reduce maternal morbidity and mortality due to postpartum Haemorrhage.

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