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Research Paper

Study of Cases of Postpartum Haemorrhage

Medical Science

KEYWORDS : Post partum hemorhhage , Maternal mortality,Uterine artery ligation.

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ABSTRACT

INTRODUCTION: PRIMARY PPH is generally defined as any amount of blood loss more than 500 ml from genital track at vaginal delivery, 1000ml at cesarean section or 1500ml at cesarean hysterectomy.12,2 Alternative definitions include a 10% drop in hematocrit13,2 or the need of blood transfusion in first 24 hours after delivery14,2.Third stage hemmorhage occurs before expulsion of placenta and true PPH occurs after expulsion of placenta.. If excessive blood loss occurs after 24 hours but before 6 weeks it is called SECONDARY PPH .The incidence of PPH is 30% among maternal mortality data2.AIMS AND OBJECTIVES: To determine the incidence of PPH, to determine the risk factors for PPH, evaluate the role of obstetrician in preventing PPH, Current protocol of management of PPH, to study maternal mortality and morbidity. MATERIAL AND METHOD: This study includes 100 patients who developed PPH from August 2012 to July 2014 at tertiary centre.Exact amount of blood loss measurement is often difficult in clinical obstetrics due to contamination with amniotic fluid and other excreta and the blood lost on floor or towels ,clothes so blood loss was assessed on the basis of measurement from the basins and blood loss on linens, mops and sponges. In all cases necessary investigations were carried out and managed accordingly. The data collected was analyzed systematically, tabulations were made and observations compared with series present by various foreign and Indian authors. RESULTS AND DISCUSSION: 29% patients belonged to urban category and 71% belonged to rural category.65% were Emergency cases. Incidence of PPH in primiparas is 41%.46% patients of PPH had undergone Cesarean section65% patients developed atonic PPH, 30% developed traumatic, 3% were associated with coagulopathy, 2% were having secondary PPH.35% of patients responded to medical therapy. In 65% patients, Operative intervention was required- in form of uterine artery ligation, Hypo gastric artery ligation, uterine compression suturing, tear suturing, obstetric hysterectomy , manual removal of placenta, reposition of uterus.Maternal mortality was 2%.CONCLUSION: PPH is a potentially life threating complication of both vaginal and cesarean deliveries. As obstetric care improves the incidence of PPH and maternal death drastically reduces. Early anticipation early interventions with proper planning are required to reduce maternal mortality and morbidity in PPH.Early diagnosis of anemia in antenatal period and correction accordingly, during delivery use of prefilled uterotonics, non hasty delivery, active management of third stage of labor having eagle's eye at blood loss more than 250 ml can prevent maternal mortality and morbidity to such a good extent. To conclude prevention is better than cure.

INTRODUCTION

Severe bleeding from the birth canal is the single most significant cause of maternal death world wide. More than half of all maternal deaths occur within 24 hours of delivery, most commonly from excessive bleeding from the birth canal . In addition to death, serious morbidity may follow postpartum hemorrhage. Sequelae include adult respiratory distress syndrome, coagulopathy, shock, loss of fertility, pituitary necrosis (Sheehan syndrome). Although many risk factors have been associated with post partum hemorrhage, it often occurs without warning, All obstetric units and practitioners must have facilities, personnel, and equipment in place to manage this emergency properly, Clinical drills to enhance the management of maternal hemorrhage has been recommended by the Joint Commission on Accreditation of Health Care Organizations. PPH is generally defined as any amount of blood loss more than 500 ml from genital track at vaginal delivery ,1000ml at cesarean section or 1500ml at cesarean hysterectomy. Alternative definitions include a 10% drop in hematocrit[13,2] or the need of blood transfusion in first 24 hours after delivery[14,2].Third stage hemmorhage occurs before expulsion of placenta and true PPH occurs after expulsion of placenta.. If excessive blood loss occurs after 24 hours but before 6 weeks it is called SECONDARY PPH. The patients ability to withstand hemorrhage and rate of loss is also important. A lower value of 300ml as cut off has been suggested for Asian women because of their lower body mass index.

Institution level obstetric cover,anaesthetic facility, laboratory service, blood bank facility for need in massive transfusions are the basic needs for perfect management of "PPH".

PPH may result from failure of uterus to contract adequately (atony), genital tract trauma (i.e. vaginal or cervical lacerations), uterine rupture, retained placental tissue, or maternal bleeding disorders. Uterine atony is the most common cause and consequently the leading cause of maternal mortality worldwide.

MANAGEMENT of PPH includes: Medical management, Mechanical methods and Surgical management.

A) MEDICAL MANAGEMENT:

It includes initiation of uterotonics along with other resuscita-

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tive methods (Two wide bore IV cannula, cross match samples, plasma expanders, and urinary catheter)

Uterine massage

⇩

Oxytocin drip of 20-40 units in 1 liters of Ringer lactate at the rate of 100-150 ml/min

⇩

Inj Methyl ergometrine 0.2 mg IM/IV

⇩

Examine the expelled placenta and membranes for evidence of completeness.

⇩

Prostaglandin F2alpha 250microgram IM (can be repeated every 15 min upto .8 doses)

⇩

Continue uterine massage.

⇩

Tab misoprostol 800-1000 micrograms either orally, per rectal or sublingually.[15,2]

B. MECHNICAL METHODS

1) Bimanual uterine artery compression.
2) Uterine Tamponande (Sengston Blackmore tube/ Bakri balloon/ Foleys catheter/)
3) Uterine packing.

C. SURGICAL METHODS:

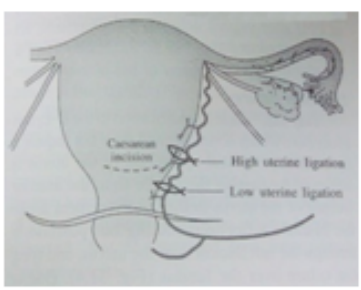
1) STEP WISE UTERINE DEVASCULARISATION:(Abd.Rabbo 1994)

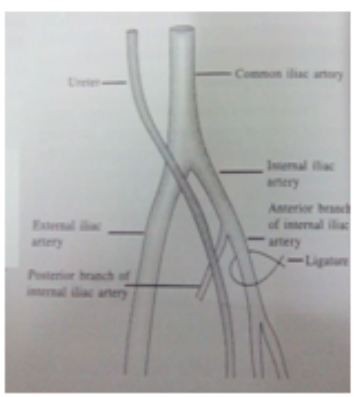
Unilateral uterine artery ligation. O'Leary technique and Open technique .

Unilateral uterine artery ligation. O'Leary technique and Open technique .

⇩

Bilateral uterine artery ligation





⇩

Low uterine vessel ligation after mobilization of bladder.

⇩

Unilateral ovarian vessel ligation.(Cruikshank)

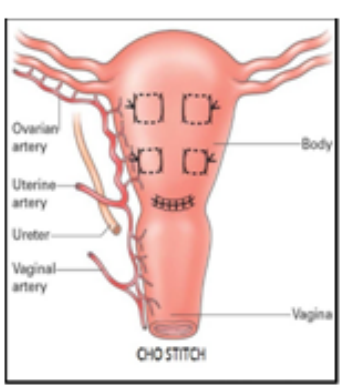
⇩

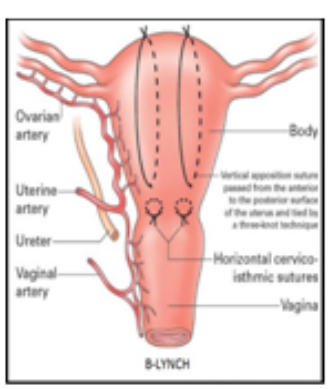
Bilateral ovarian vessel ligation.

D)UTERINE COMPRESSION SUTURES:

- B Lynch compression sutures
- Cho multiple square sutures
- Hayman uterine compression
- sutures.

E)ARTERIAL EMBOLIZATION
F)OBSTERIC HYSTERECTOMY





D)UTERINE COMPRESSION SUTURES:

- B Lynch compression sutures
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- Hayman uterine compression
- sutures.

E)ARTERIAL EMBOLIZATION
F)OBSTERIC HYSTERECTOMY

AIMS AND OBJECTIVES:

1. To determine the incidence of PPH.

2. To determine the risk factors for PPH.
3. Evaluate the role of obstetrician in preventing PPH.
4. Current protocol of management of PPH
5. To study maternal mortality .and morbidity

METHODOLOGY

This study includes 100 patients who developed PPH from August 2012 to July 2014.

Blood loss was assessed on the basis of measurement from the basins and blood loss on linens, mops and sponges. In all cases necessary investigations were carried out and managed accordingly. The data collected was analyzed systematically, tabulations were made and observations compared with series present by various foreign and Indian authors.

TABLES

1. DISTRIBUTION OF PATIENTS

	NO. OF CASES	PERCENTAGE
URBAN	29	29%
RURAL	71	71%
TOTAL	100	100%

Most of the patients belonged to rural category (71%) owing to their poor antenatal checkup and late presentation.

2.

	NO. OF CASES	PERCENTAGE
EMERGENCY	65	65%
REGISTERED	35	35%
TOTAL	100	100%

Present study shows that occurrence of PPH is maximum in emergency cases. Occurrence of PPH is lower in registered patients because they have regular antenatal checkups, high risk cases were identified and managed accordingly, Anemia is corrected in specific group of patients. Further on their mode of delivery has been preplanned.

3.PARITY AND PPH

PARITY	NO. OF CASES	PERCENTAGE
Primipara	41	41%
2nd	20	20%
3rd	14	14%
4th	12	12%
5th and above	13	13%
TOTAL	100	100%

Incidence of PPH in primiparas is 41%, it decreases gradually and increases again in Multiparas.Primipara are more prone to prolonged labour, uterine inertia and operative interference all of which predisposed to PPH.. In grand multipara size of baby increases, incidence of malpresentation is high, both uterine and abdominal wall lack a good muscular tone, incidence of ante partum hemorrhage is high. Moreover as a result of repeated child birth, poverty, malnutrition, overwork, chronic iron deficiency anemia, these women are in a poor condition to withstand even a slight amount of blood loss.[7,10]

4,MODE OF DELIVARY AND PPH

MODE OF DELIVERY	NO OF CASES	PERCENTAGE
Spontaneous vaginal delivery	45	45%
Induced vaginal delivery with oxytocin/PGE2	3	3%
Assisted breech delivery	4	4%
Forceps delivery	2	2%
Lower segment Cesarean section	46	46%
Total	100	100%

Incidence of PPH is higher in LSCS then in vaginal delivery. Procedures like previous LSCS, previous 2 LSCS which deal with the endometrial cavity as a whole increases the chances of endometritis and have been shown to have an increased incidence of placenta previa and accreta also. Scar dehiscence and rupture rate increases in previous cesarean section. Out of 14.9 % of placenta previa, placenta was adherent in 6.2% cases, 3 cases of accreta was noted undergone cesarean hysterectomy.

5 TYPES OF PPH

	PRESENT STUDY	BIBI SHAMSHAD ET AL	I.MARCOVIVI (2005)
ATONIC	65%	70.5%	70%
TRAUMATIC	30%	29.4%	20%
COAGULOPATHY	3%		
SECONDERY HEMORRHAGE	2%		

Tone, tissue, trauma and thrombin are the common causes among which most common is atonic cause (65%) next is traumatic (30%). [6, 10]

6 ETIOLOGICAL FACTORS OF ATONIC PPH

FACTORS	PRESENT STUDY	BIBI SHAMSHAD et al
Multipara	14 (21%)	-
Placenta previa	12 (18.7%)	15(15%)
Multiple pregnancy	8 (12.2%)	2(2.1%)
PIH/Eclampsia	8 (12.5%)	-
Induced Labor	7 (10/9%)	20 (20.9%)
Abruptio Placentae	6 (9.3%)	10(10.4%)
Polyhydramnios	3 (4.6%)	-
Uterine inversion	3 (4.6%)	-
Prolonged labor	2 (3.1%)	21(21%)
Retained Placenta	2(3.1%)	11(11.4%)
Infection	-	5 (5.2%)
Retained placental tissue	-	12 (12.5%)

Atonic PPH is most commonly seen in multipara (20.3%) Placenta previa is the second most common cause (12%).9.3% patients having abruptio placenta of which 2 patients having DIC.[6]

7 ETIOLOGICAL FACTORS OF TRAUMATIC PPH

SITE OF INJURY	NO OF PATIENTS	PERCENTAGE
Episiotomy wound hematoma	9	30%
Vaginal tear	7	23.33%
Cervical tear	6	20%
Colporrhexis	4	13.33%
Lower uterine segment rupture	2	6.66%
Broad ligament hematoma	2	6.66%

Episiotomy wound hematoma is the most common cause of traumatic PPH (9%).secondary PPH accounts for 2% as compared to THANGAPPAH (1.67%).[9]

8 MODE OF TREATMENT AND PPH

METHODS	PRESENT STUDY	BIBI SHAMSHAD et al
Medical treatment	35%	22%
Episiotomy wound hematoma drainage	9%	2.2%
Cervical and vaginal tear suturing	13%	15.5%
Uterine packing	5%	36.8%
Uterine artery ligation	18%	-
Compression sutures	4%	-
Sub total hysterectomy	4%	-
Total hysterectomy	4%	2.2%
Hypogastric artery ligation	2%	0.7%
Manual removal of placenta	5%	8%
Uterus reposition	1%	-
Removal of retained placental tissue	-	8.9%

35% of the patients responded to medical management, rest 65% required surgical intervention, of which, the most common intervention was that of uterine artery ligation. [6]

9. MATERNAL MORTALITY AND PPH

	PRESENT STUDY	SAHU LATIKA	KAUL V
MORTALITY	2%	5.5%	6.1%

Maternal mortality in our study was 2%.

DISCUSSION.

Present study was carried out between August 2012 to July 2014.29% patients belonged to urban category and 71% belonged to rural category.65% were Emergency cases.Incidence of PPH in primiparas is 41%.46% patients of PPH had undergone Cesarean section65% patients developed atonic PPH, 30% developed traumatic, 3% were associated with coagulopathy, 2% were having secondary PPH.35% of patients responded to medical therapy.In 65% patients, Operative intervention was required- in form of uterine artery ligation, Hypo gastric artery ligation, uterine compression suturing, tear suturing, obstetric hysterectomy , manual removal of placenta, reposition of uterus. Maternal mortality was 2%.

CONCLUSION

PPH is a potentially life threating complication of both vaginal and cesarean deliveries. As obstetric care improves the incidence of PPH and maternal death drastically reduces. Multipronged efforts made to combat PPH and this may be in form of Emergency care, anemia detection and correction dietary supplementation institutional deliveries avoidance of prolonged labour,training of birth attendance, active management of third stage of labour,training for correct use of uterotonics,accurate diagnosis for cause of bleeding, adequate and prompt restoration of circulatory volume, ask for help, any form of operative procedure should be performed timely.

Since last decade conservative surgical procedure have been successfully used in various circumstances and forms. Conservative surgical approach not only controls PPH also preserves woman's reproductive functions and avoid hysterectomy and its related complications. Thus early anticipation early interventions with proper planning are required to maternal mortality and morbidity in PPH. To conclude prevention is better than cure.

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