

## Conservative Management of Pph

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### Abstract

**Objectives:** This study was conducted to study different risk factors responsible for PPH, To study current protocols in management of PPH, To evaluate the role of obstetrician in management of PPH.

**Methods:** This study includes 726 patients who developed PPH from August 2014 to July 2016. Blood loss was assessed on the basis of measurement from linens mops and sponges. All necessary investigations were carried out. The data collected was analyzed and tabulations were prepared.

**Conclusion:** Incidence of PPH is more in primipara. Incidence of PPH is more in vaginal delivery as compared to cesarean section. Most common cause of PPH is uterine atony. Conservative management is done in most of the cases of pph.

**Keywords:** Uterine Atony, post partum hemorrhage, Oxytocin, compression suture.

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### I. Introduction

Postpartum hemorrhage is defined as blood loss of more than 500ml following vaginal delivery and more than 1000ml following caesarean section, within first 24 hours of childbirth. Approximately one third of maternal deaths are due to hemorrhage and the survival rate of these patients depends on length of time taken for active management of these patients. Hence main objective of the present series is to study different management protocols of PPH which decrease maternal mortality and morbidity. PPH present as severe bleeding called as massive hemorrhage, Continuous bleeding, Slow trickling, Hematoma<sup>2</sup>; **1. Atonic PPH (80%) (Tone)** It is the commonest cause. After the separation of placenta, the torn uterine sinuses are compressed ineffectively due to imperfect contraction and retraction of uterus. It occurs in the following conditions. • Mismanaged 3rd stage of Labor, Grand multipara, Over distention of uterus, Antepartum hemorrhage, Prolonged Labor, etc. **2. Traumatic PPH (20%) common in** Rupture of uterus, Laceration of cervix as well as tear, Episiotomy, vaginal tears, broad ligament hematoma Symptomatic uterine rupture requires surgical repair of the defect or hysterectomy. When detected in the postpartum period, a small asymptomatic lower uterine segment defect or bloodless dehiscence can be followed expectantly.<sup>8</sup> Patients with persistent signs of volume loss despite fluid replacement, as well as those with large or enlarging hematomas, require incision and evacuation of the clot.<sup>9</sup> **3. Tissue:** Retained placenta (i.e., failure of the placenta to deliver within 30 minutes after birth) occurs in less than 3 percent of vaginal deliveries.<sup>10</sup> One management option is to inject the umbilical vein with 20 ml of a solution of 0.9 percent saline and 20 units of oxytocin. **4. Blood coagulation disorders (Thrombi):** Administration of recombinant factor VIIa or clot-promoting medications (e.g. tranexamic acid may be considered.)<sup>10,11</sup>

Secondary PPH is cause by<sup>12</sup> Sub involution of uterus, Retained placental tissues (most common), Fibroid uterus, Lower genital tract lacerations/ hematoma, Placental abnormalities; Managed by Use of oxytocics, Antibiotics coverage, Tranexamic acid, Uterine evacuation, Selective arterial embolization , Intravenous oxytocin is the recommended uterotonic drug for the treatment of PPH.<sup>16</sup>

### II. Aims And Objectives

To study different risk factors responsible for PPH and study current protocols in management of PPH.

### III. Materials And Methods

The study was carried out in Department of Obstetrics and Gynecology, at tertiary health care center. The data was collected for a period of 2 years from January 2015 to December 2016. During this period 9911 patients got delivered and 8220 patients underwent cesarean section. Out of these 726 patients had PPH.

Detailed history and examination findings were noted in order to find out the possible cause of PPH. Blood loss was assessed on the basis of measurements from apparent blood loss, loss from linens, mops, tampons and sponges. In all cases necessary investigations were carried out and managed accordingly. The data collected was analyzed systemically, tabulations were made and observations compared with series present by various foreign and Indian authors.

**Table 1 – Maternal AGE**

Age in years	Present Study	Kaul V et al
20-25	47%	45%
26-30	31%	35%
30 and above	22%	20%

**Table 2 – PARITY**

Parity	Present study
Primi	31%
2 <sup>nd</sup>	16%
3 <sup>rd</sup>	17%
4 <sup>th</sup>	16%
5 <sup>th</sup> and above	20%

**Table 3 – Mode Of Delivery**

	Mode of delivery	Percentage	Total
Cesarean section	LSCS	47%	47%
Vaginal delivery	Spontaneous vaginal delivery	31%	53%
	Assisted Breech delivery	8%	
	Induced vaginal delivery	14%	
	Total	100%	

**Table 4- Types Of Pph**

	Percentage of cases	I Marcovivi (2005) <sup>24</sup>
Atonic	60%	70%
Traumatic	33%	20%
Coagulopathy	4%	-
Secondary hemorrhage	3%	-
Total	100%	-

**Table 5 –Mode Of Management Of Pph**

	Methods	Percentage of cases
Medical Management	Medical treatment	34%
Surgical Management	Uterine artery ligation	22%
	Cervical and vaginal tear repair	23%
	Episiotomy hematoma repair	5%
	Uterine packing	8%
	Compression sutures	5%
	MRP	3%
	Total	100%

#### IV. Discussion

PPH is defined as any amount of blood loss more than 500 ml from genital tract in vaginal delivery following birth of the baby, more than 1000 ml at cesarean section or 1500 ml at cesarean hysterectomy.<sup>1</sup> (WHO 1990). Approximately one third of maternal deaths are due to hemorrhage and the survival rate of these patients depends on length of time taken for active management of these patients. Review of recent intra Indian literature reveals that hemorrhage accounts for over 25% of maternal deaths of which 30% deaths are caused by PPH. PPH affects 1-3% of all deliveries. The incidence is about 4-6% of all deliveries. “When uterine atony is perceived to be a cause of the bleeding, the following mechanical and pharmacological measures should be instituted, in turn, until the bleeding stops:<sup>5</sup>Bimanual uterine compression (rubbing up the fundus)<sup>7</sup> to stimulate contractions, Syntocin 5 units by slow intravenous injection, Ergometrine 0.5 mg by slow intravenous or intramuscular injection, Syntocin infusion (40 units in 500ml Hartmann’s solution at 125ml/hour), Carboprost 0.25 mg by intramuscular injection repeated at intervals of not less than 15 minutes to a maximum of 8 doses, Direct intramyometrial injection of carboprost 0.5 m, Misoprostol 1000 micrograms rectally, Misoprostol can be administered orally, vaginally, rectally.<sup>6</sup> SURGICAL MANAGEMENT is by B-Lynch suture that limit the migration of the fundus from the outward pressure of an intrauterine balloon and thereby enhance tamponade against blood flow through the spiral arteries.<sup>13</sup> Stepwise uterine devascularisation<sup>17</sup> (described by Abd Rabdo in

1994) (A) Uterine vessels ligation 90% of uterine blood flow is from the uterine arteries. In atonic PPH, B/L uterine ligation is effective in 75% case. O'Leary and O'Leary method<sup>18</sup>- Success rate 80-95%. In present study uterine artery ligation was done in 22% of total patients and success rate was reported in 96% of total patients. (B) Ovarian artery ligation<sup>19</sup> - successfully used in combination with HAL (C) Anterior division of internal iliac Artery Ligation (D) Uterine compression/ hemostatic sutures – **B-lynych brace compression sutures**<sup>20</sup> - continuous vertical suture was used to envelop and mechanically compress the uterus. **Hayman**<sup>21</sup> An isthmo cervical stitch is inserted to control bleeding from cervix and lower segment. **Multiple square sutures (CHO sutures)**<sup>21</sup> – to approximate the anterior and posterior uterine wall until no space is left in the uterine cavity.

In present study, 59% patients were unregistered patients and 41% were registered patients. Both in present study and Kaul V et al study, occurrence of PPH is maximum in age group 20-24 years i.e. age of maximum fertility. Age indirectly reflects on the parity also. Present study shows that the occurrence of PPH is high in primipara (31%) which is comparable to Kaul V et al study (47.1%) and decreases gradually with increasing parity but again rise is seen in grand multipara. In present study, 31% patients had spontaneous vaginal delivery and 47% patients by LSCS. Iqbal et al<sup>22</sup> (2009) stated that spontaneous vaginal delivery had 57% lower risk of severe PPH and emergency cesarean section delivery had 55% higher risk as compared with pre labour cesarean section delivery. SJ Kore<sup>23</sup> study on stepwise devascularization on 23 patients achieved success in 95.7% cases. O'Leary in review of 265 women who underwent uterine artery ligation, reported success rate of greater than 95%.<sup>19</sup> In present study uterine artery ligation was done in 22% of total patients and success rate was reported in 96% of total patients. In present study medical management was done in 34% of patients which was successful in 97% of patients. In present study uterine packing was done in 8% of patients where medical management fail to control PPH. In present study when packing and medical management both fail to control PPH compression sutures taken in around 5% of patients.

## V. Conclusion

PPH is potentially life threatening complication of both vaginal and caesarean deliveries. Multipronged efforts made to combat PPH and this may be in form of Emergency care, anemia detection, institutional deliveries, avoidance of prolonged labor, active management of third stage of labour, correct use of uterotonics, accurate diagnosis of cause of bleeding, prompt restoration of circulatory volume should be done timely. Since last decade conservative and surgical procedure have been successfully used. Conservative surgical approach not only controls PPH also preserves woman's reproductive functions and avoid hysterectomy and its related complication.

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