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A CROSS-SECTIONAL RESEARCH TO ASSESS THE VARIOUS MANAGEMENT OPTIONS AND DISEASE-CAUSING AGENTS AMONG THE PATIENTS OF PPH (PRIMARY POSTPARTUM HEMORRHAGE)

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Abstract:

Objective: *This particular research aims to indicate various disease management options and the causes of the disease among primary postpartum haemorrhage patients.*

Patients and Methods: *We completed this cross-sectional research at Gynecology and Obstetrics Department of Sir Ganga Ram Hospital, Lahore commencing from February 2017 to August 2017 on a total of 120 PPH Primary Postpartum Hemorrhage patients. We also determined the available management options and causes of the disease among the selected patients.*

Results: *Selected patients were in the age group where the minimum and maximum age was respectively twenty and forty years with a mean age of (32.43 ± 6.23) years. Various age group were (20 – 25), (26 – 30), (31 – 35) and (36 – 40) years respectively including 36, 26, 19 and 39 patients with respective proportions of 30%, 21.67%, 15.83% and 32.5%. About parity, 36 patients were primiparous (30%), 81 patients were multiparous (67.5%) and 3 patients were grand multiparous (2.5%). The most repeated cause of PPH was uterine tony which was common among 78 patients (65%). We carried out hysterectomy among 50 patients (41.6%).*

Conclusion: *Majority of the patients were in the age bracket of (36 – 40) years and they were also multiparous. Research outcomes conclude about maximum disease involvement of the mentioned age group age parity. The most repeated cause of PPH was uterine tony and we also carried out hysterectomy among patients.*

Keywords: *Mortality, Morbidity, Maternal, Primary Postpartum Hemorrhage (PPH), Uterine Atony, Parity, Primiparous, Multiparous and Grand Multiparous.*

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INTRODUCTION:

PPH is generally a threat all over the world causing a number of morbidity and mortality cases especially maternal mortality. According to WHO, PPH refers to a blood loss from a genital tract that exceeds a limit of (500 ml) after delivery [1]. Another definition refers to PPH as a hematocrit (Hct) that is a fall of ten percent or a management of haemorrhage requiring transfusion of blood among patients [2, 3]. In Pakistan, more than twenty-five thousand females die every year because of PPH [3]. PPH is of two kinds which include primary haemorrhage and secondary haemorrhage. Primary haemorrhage refers to a haemorrhage that occurs within a time period of twenty-four hours after the delivery; whereas, secondary haemorrhage refers to a haemorrhage that occurs in the timeframe of first twenty-four hours to an extended time slot of six weeks after delivery [4].

The most repeated cause is uterine atony which is reported among more than ninety percent of the patients because of myometrium retraction or contraction in order to conclude the embedded sinuses [5]. Placental site retraction can possibly be restricted through retained placental membrane or tissue which is another PPH causing factor [6]. In addition to these two factors, the other two factors of PPH are coagulopathy and genital tract lacerations [7]. There are few other risk factors such as uterus over distension among patients having multiple gestation, macrosomia and poly-hydramnios. In the same way, an exhausted uterus among labour induction or augmentation and infections may have a correlation with uterine atony. Uterine anomalies which include uterine wall scaring or an abnormal adherent placenta may also cause retained conception product. In the same way, macrosomia and instrumental delivery have an association with genital tract lacerations. An abrupt placenta has an association with coagulopathy [2 – 4].

In order to prevent PPH consequences, the identification of PPH causes is very important which involves the prevention of morbidity and mortality rate reduction [7]. PPH treatment depends on the measurement taken for the specified management options and associated reasons that also includes surgical intervention and medical treatment [8]. Hypovolemic shock is one of the PPH causes; which may also lead to Sheehan's syndrome, ARF (Acute Renal Failure) and ARDS (Adult Respiratory Distress Syndrome). Viral diseases and transfusion reaction are linked with transfusion of blood. Another associated complication is DIC (Disseminated Intravascular Coagulopathy) [8, 9]. Delay in the disease diagnosis increases the chances of maternal morbidity so it is important to have a timely diagnosis with an in time initiation of required treatment [10].

MATERIAL AND METHODS:

We completed this cross-sectional research at Gynecology and Obstetrics Department of Sir Ganga Ram Hospital, Lahore commencing from February 2017 to August 2017 on a total of 120 PPH Primary Postpartum Hemorrhage patients. We also determined the available management options and causes of the disease among the selected patients.

We shortlisted a total of 120 patients in the age bracket of (20 – 40) years who developed an onset of PPH in the timeframe of first twenty-four hours. We did not include any patients with chronic illness and IUFD (Intra Uterine Fetal Death). We took ethical permission and informed consent from hospital and patients. All the fundamental investigations were carried out before the commencement of this research. We documented al the outcomes of retained placental tissue, atonic uterus, membrane, coagulopathy and genital tract laceration (perineal, extended episiotomy, cervical, vaginal or uterine tear) on a Performa.

Every patient received a standard disease management therapy. In case of failure of medical treatment, the other option was the intervention of surgical treatment. Statistical analysis was carried out by using SPSS software.

RESULTS:

Selected patients were in the age group where the minimum and maximum age was respectively twenty and forty years with a mean age of (32.43 ± 6.23) years. Various age group included four age bracket categories which were (20 – 25), (26 – 30), (31 – 35) and (36 – 40) years respectively including 36, 26, 19 and 39 patients with respective proportions of 30%, 21.67%, 15.83% and 32.5%. About parity, 36 patients were primiparous (30%), 81 patients were multiparous (67.5%) and 3 patients were grand multiparous (2.5%). The most repeated cause of PPH was uterine tony which was common among 78 patients (65%). We carried out hysterectomy among 50 patients (41.6%) as shown in Table – I.

Detailed outcomes about the parity and frequency, primary PPH and available management options are given in Table – I and II.

Table – I: Frequency of Age and Parity

Age and Parity		Number	Percentage
Age	20 to 25 Years	36	30.00
	26 to 30 Years	26	21.67
	31 - 35 Years	19	15.83
	36 - 40 Years	39	32.50
Parity	Primi-parous	36	30.00
	Multiparous	81	67.50
	Grand multiparous	3	2.50

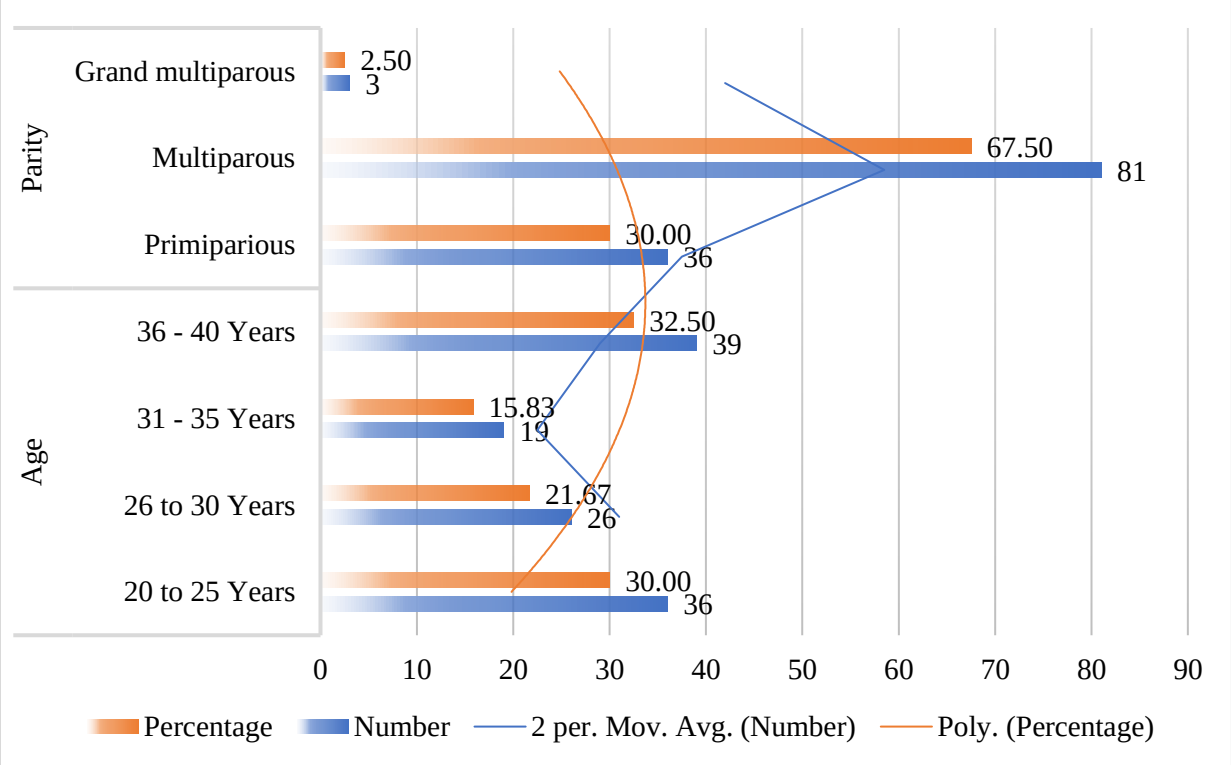
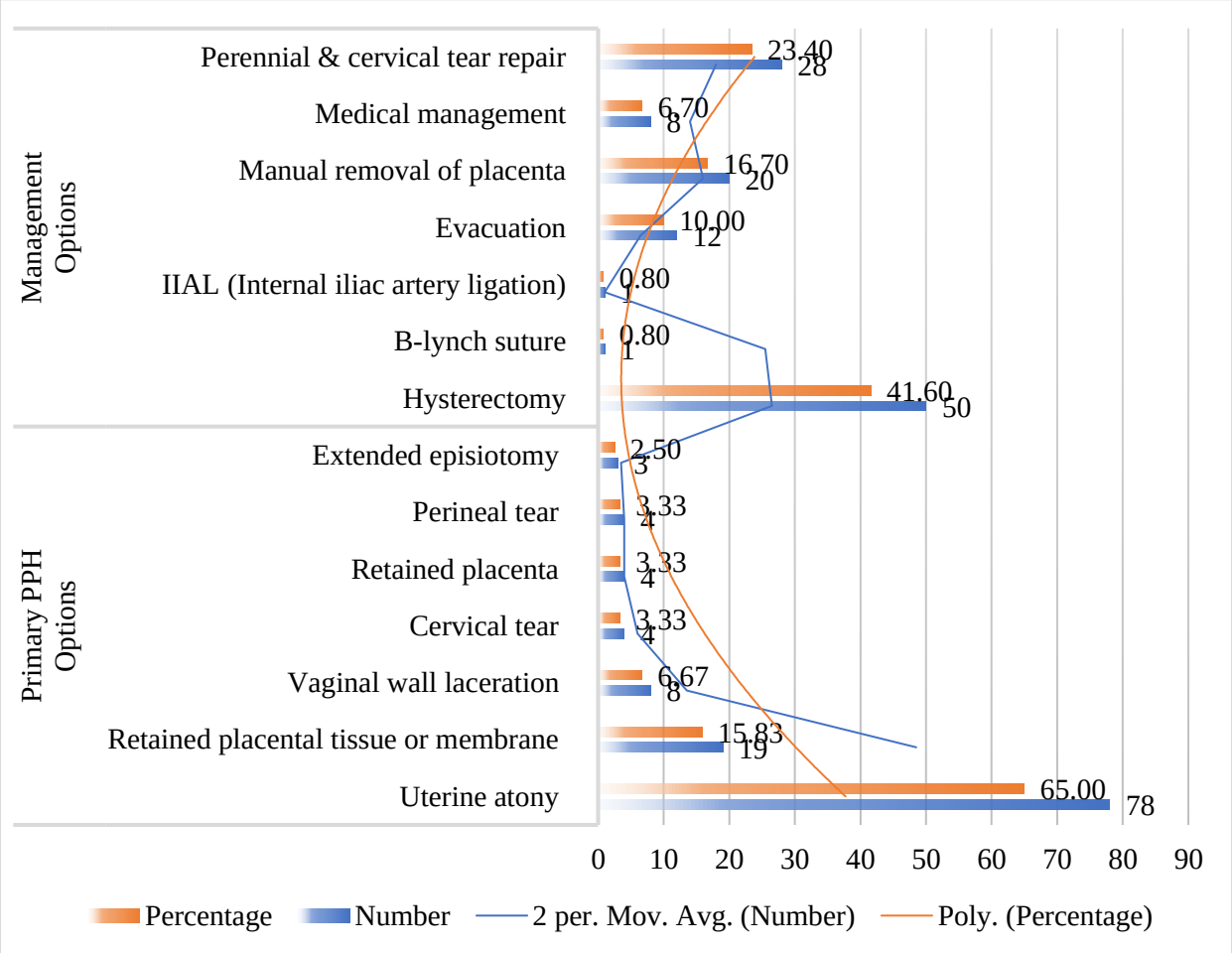
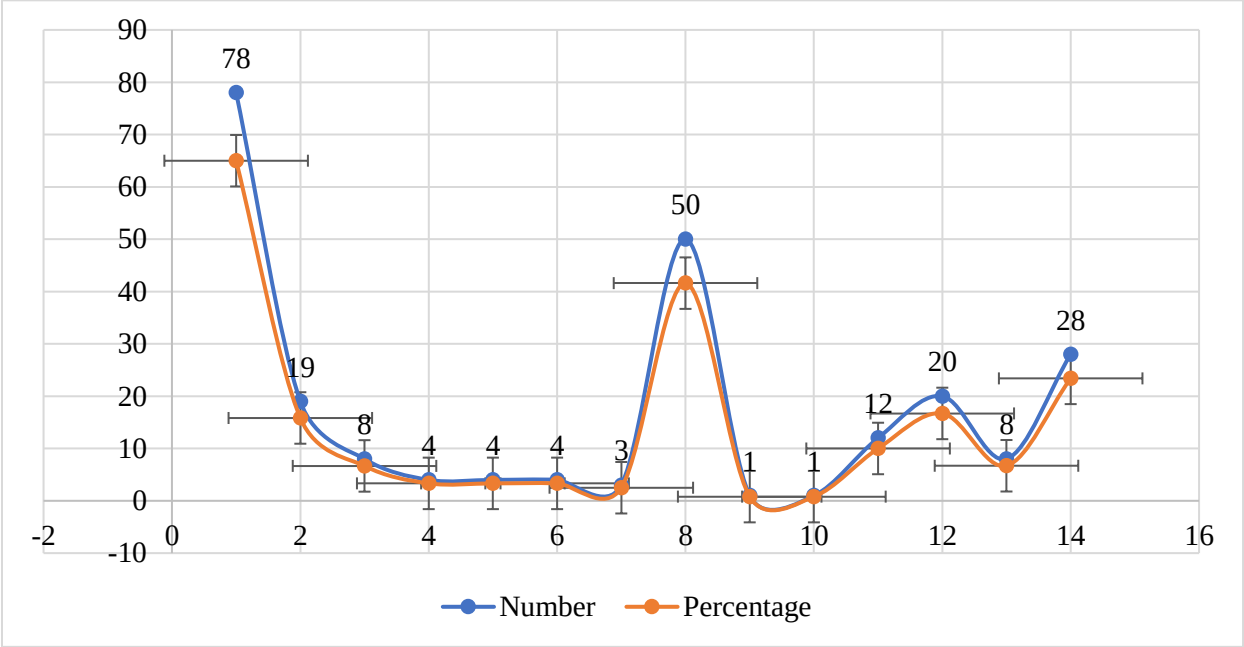


Table – II: Management and Primary PPH Options

PPH and Management Options		Number	Percentage
Primary PPH Options	Uterine-Atony	78	65.00%
	Retained placental membrane or tissue	19	15.83%
	Vaginal wall laceration	8	6.67%
	Cervical tear	4	3.33%
	Retained placenta	4	3.33%
	Perineal tear	4	3.33%
	Extended episiotomy	3	2.50%
Management Options	Hysterectomy	50	41.60%
	B-lynch suture	1	0.80%
	Internal iliac artery ligation	1	0.80%
	Evacuation	12	10.00%
	Manual removal of placenta	20	16.70%
	Medical management	8	6.70%
	Perennial & cervical tear repair	28	23.40%





DISCUSSION:

According to WHO, PPH refers to a blood loss from a genital tract that exceeds a limit of (500 ml) after delivery [11]. Its prevalence was in the range of 4.5% – 19% having a significant correlation with morbidity and mortality among affected individuals [12 – 13]. In the underdeveloped countries, the maternal deaths are about 28% which are caused by an onset of PPH especially in Pakistan [10].

Selected patients were in the age group where the minimum and maximum age was respectively twenty and forty years with a mean age of (32.43 ± 6.23) years. Various age group included four age bracket categories which were (20 – 25), (26 – 30), (31 – 35) and (36 – 40) years respectively including 36, 26, 19 and 39 patients with respective proportions of 30%, 21.67%, 15.83% and 32.5%. The outcomes clearly reflect an association of PPH with age factor as the advancing age more likely involved in the PPH onset. Few research studies also reported a higher incidence of PPH among the patients who were in the age bracket of more than thirty years [1, 14]. Kashanian reported a reduced loss of blood in the aged patients and he further reported the maximum loss of blood among the patients in the age bracket of (15 – 19) years [12]. Whereas, our research reported an age bracket of (20 – 40) years. About parity, 36 patients were primiparous (30%), 81 patients were multiparous (67.5%) and 3 patients were grand multiparous (2.5%). According to Magann, the primiparous frequency was higher than our outcomes as he reported a proportion of forty-one percent to ours thirty percent; whereas, Hazara reported the same as twenty-nine percent which is almost same to our outcomes [9, 15]. Another author reported the parity among patients having primiparous cases as 18%, multiparous 25% and grand multiparous as 57% [5]. The most repeated cause of PPH was uterine tony which was common among 78 patients (65%). We carried out hysterectomy among 50 patients (41.6%); which is similar to other local research outcomes [1, 13].

High resource countries the patients of PPH need a hysterectomy as it is a life-threatening condition [16, 17]. According to Sheikh, the most repeated cause among PPH patients was uterine atony [1].

CONCLUSION:

Majority of the patients were in the age bracket of (36 – 40) years and they were also multiparous. Research outcomes conclude about maximum disease involvement of the mentioned age group age parity. The most repeated cause of PPH was uterine tony and we also carried out hysterectomy among patients.

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