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A CROSS-SECTIONAL RESEARCH ON THE ASSOCIATION OF FIRST TRIMESTER BLEEDING PER VAGINAL AND PELVIC PAIN FREQUENCY

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Abstract:

Objective: *Aim of the research was the determination of pelvic pain frequency and bleeding per vaginal during 1st trimester.*

Methods: *We included 150 pregnant cases in the age limit of 18 – 35 years who were in their 1st trimester of pregnancy, research design was cross-sectional and it was completed from July, 2015 to July, 2016 in the time span of one year. SPSS-20 was used for the data entry and analysis.*

Results: *Average age was (26.33 ± 4.23), pelvic pain frequency was 29.33% and per vaginal bleeding was 12%. There was no statistical significant difference observed in the vaginal bleeding and pelvic pain in various groups of age as per the research stratification analysis. Pelvic pain rate was high in the primigravida women in comparison to the multigravida with a p-value of (0.003).*

Conclusion: *Research concludes that significant women strength experienced vaginal bleeding and pelvic pain in the 1st trimester, for a practitioner it is important to practice sound diagnostic and clinical expertise for the treatment of pregnancy complications as these abnormalities are potent instrument of distress in the women and their partners.*

Keywords: *Pelvic pain, 1st Pregnancy Trimester, Vaginal Bleeding and Gravidity.*

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INTRODUCTION:

An emergency department experiences the most common complication if the 1st trimester of pregnancy is per vaginal bleeding and frequency of pelvic pain, which is a constant distress for the women in pain. In most of the cases things go normal but risk of ectopic pregnancy and miscarriage is high [1]. Because of the hormone change crampy pelvic pain is regular complain by the women because of two factors uterus growth and rapid flow of blood. Normally USG diagnosis these issues in the 1st trimester. In the case of light to severe bleeding clinician is challenged and immediate treatment is mandatory. Many causes are involved in the early pregnancy vaginal bleeding and pelvic pain related to pregnancy or surgery [2]. Every one out of five cases experience these issues, numerous research studies also estimate thirty percent of complains about the abdomen pain and 24.2% complain of bleeding [3]. Diagnosis options can be obtained through USG in the case of miscarriage, pain and ectopic pregnancy as observed in the case of nephrolithiasis and appendicitis [4]. Numerous other research studies also observed 20 – 30 percent early pregnancy complains about the same issues. In the repeated causes of these issues we include (42.6%) abortions, (11.5%) sub-chorionic hematomas, (11.5%) ectopic pregnancies, (3.3%) molar pregnancies, (3.3%) fibromas, (1.6%) corpus luteum cyst and (26.2%) normal cases [5]. For the overall pregnancy treatment betterment, the guidelines of National Institute of Health and Care Excellence (NICE, 2012) are to be implemented to address healthcare and maternal health. There is adverse relation in the 1st trimester and complications involving miscarriage, membranes premature rupture, preterm birth, restricted fetal growth [6, 7]. In the light bleeding best prognosis can be obtained and it is limited in the case of an early pregnancy (< 6 gestation weeks). A worst prognosis is observed in excessive bleeding that extends to the end of 2nd trimester [8, 9]. Effective interventions are scarce but assurance of less adversities can be assured. No literature is found on the subject for the estimation of the burden of the issue in the pregnant cases and further investigations are required in this regard. Our research puts emphasis on the strategies and diagnosis to overcome these issues. Aim of the research was the determination of pelvic pain frequency and bleeding per vaginal during 1st trimester.

METHODS:

Design of the research was cross-sectional and it was completed in the time span of one year starting from July, 2015 to July, 2016 in the DOW, Karachi. WHO calculator was used for the population calculation with error margin, interval confidence and significance respectively 7%, 95% and 5%) in the 150-sample population through non-probability consecutive method of sampling. Pregnant women in the age of 18 – 40 years having confirmed pregnancy through USG, gravida women 1 – 3 were made a part of the research in the 1st trimester. Non-pregnant, above twelve-week gestational age, pre-head pelvic pain and bleeding cases were not included in the research. Pelvic pain is referred as non-pleasant discomfort of the senses such as patient pain experience in the in lower abdomen area such as right and left iliac fossa, hypogastrium, lower backache and perineal region. As pain is counted as a parameter of the clinical investigation and it is difficult to monitor but VAS scale is used for the monitoring of the pain and it is scored in the range of 0 – 10 as no pain to severe pain.

Bleeding can be defined as the clinical assessed continuous spotting of blood. From the 4th to 12th gestational age period is the period of 1st trimester counted through USG or last menstrual period. Research was started after the approval of hospital ethical committee and informed consent of the participants and confidentiality was maintained about their credentials of the patients. A consultant supervised all the activity of the research with 5-year experience. Data was gathered on a pre-designed Performa and SPSS-20 was used for the data analysis. Required and mandatory variables were also calculated with significant p-value of (<0.05), Chi-Square test was also applied.

RESULTS:

Research included 150 pregnant women in the 1st trimester of pregnancy with the inclusion criteria as mentioned earlier. Below 25 years (44.67%), in the range of 26 – 30 years (36.67%) and above 30 years (18.67%) pregnant cases were included as shown in Table-I with a mean age of (26.33 ± 4.23) years including the gravida status. The ratio of primigravida and multigravida was respectively 58 (38.67%) and 92 (61.33%) cases. Mean gestational age was (8.57 ± 2.20) in the range of 5 – 12 weeks. Pelvic pain frequency in 1st trimester was noticed in the 44 cases 29.33%. Vaginal bleeding was observed in 12 percent women. No statistical significant difference was observed in the 1st trimester vaginal bleeding having significant p-value as (0.309). Similarly, no significant vaginal bleeding frequency was observed in the gestation age having p-value as (0.782). It was also insignificant in the multigravida and primigravida. It was observed in the stratification analysis that pelvic pain frequency was not significant in the various groups of age having p-value as (0.61). Similarly, pelvic pain frequency was not significant between the gestational groups of age having p-value as (0.96). Whereas, significant high pelvic pain was observed in the primigravida women in comparison to the multigravida having p-value as (0.003) as shown in Table-IV.

Table 1. Descriptive statistics of characteristics of women (n= 150)

Descriptive Statistics		Age (Years)	Gestational Age (Weeks)
Mean ± SD		26.33 ± 4.23	8.57 ± 2.20
Confidence 95% 051=0 interval for mean	Lower Bound	25.64	8.22
	Upper Bound	27.01	8.93
Range		18 to 35	5 to 12

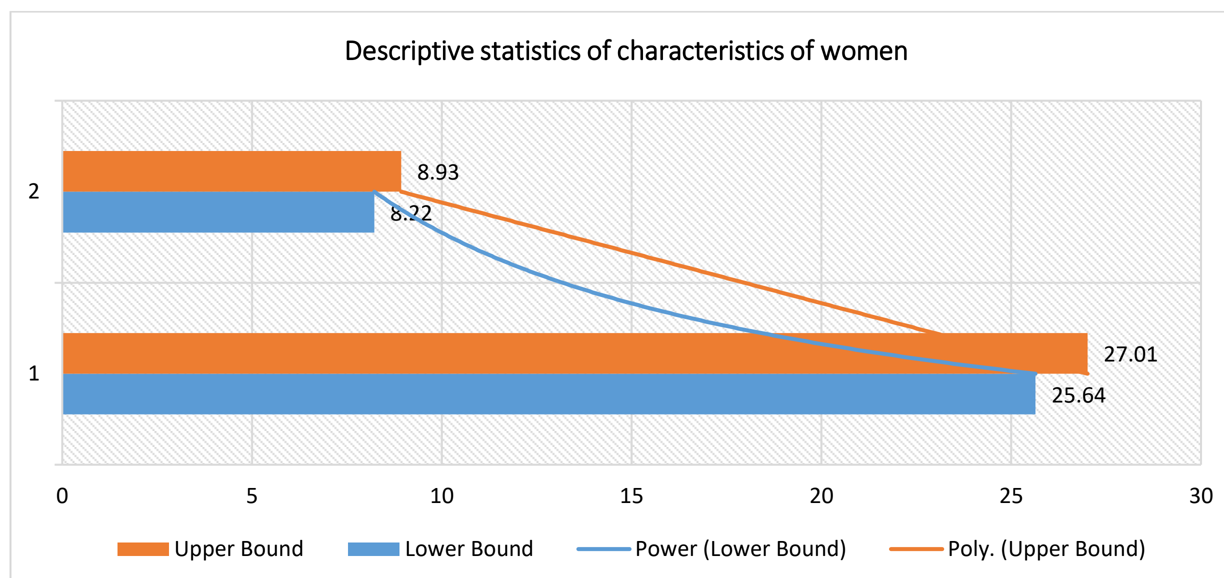


Table 2. Descriptive statistics of gravidity

Type of gravida	Number	Percentage
Primigravida	58	38.6
Multigravida	92	61.3

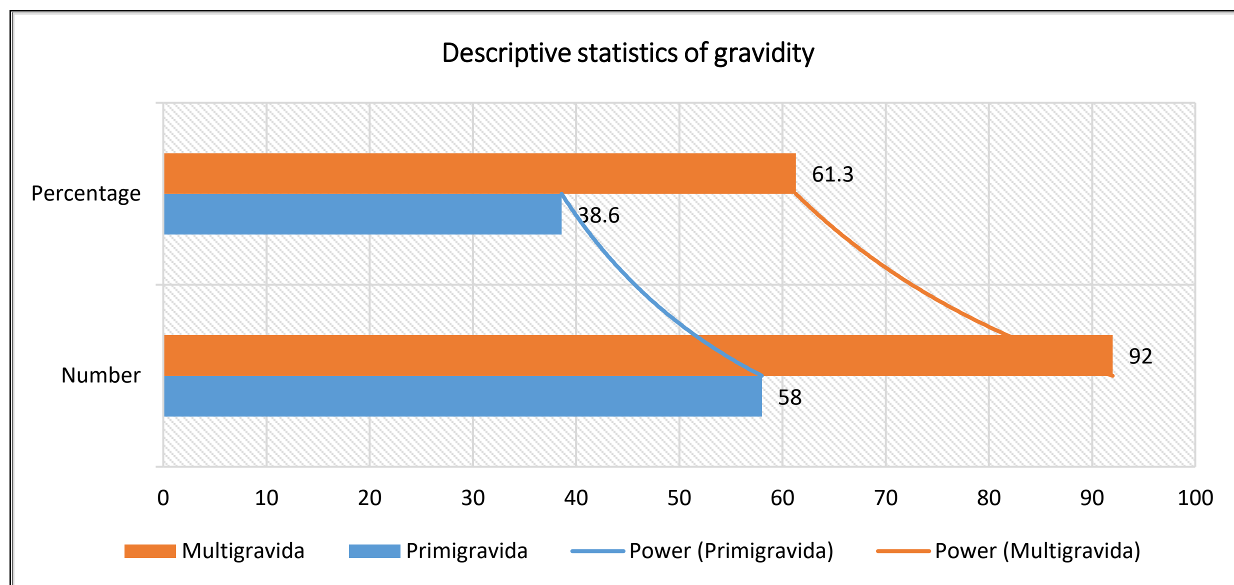


Table 3. Bleeding per vaginum with respect to maternal characteristics

Characteristics		Per vaginal bleeding N= 150				p-value	Chi square
		Yes		No			
		Number	Frequency	Number	Frequency		
Age group (Years)	< 25 n= 67	9	13.4	58	86.6	0.309	2.35
	26 – 30 n= 55	8	14.5	47	85.5		
	>30 n= 28	1	3.6	27	96.4		
Gestational age	≤ 9 weeks n= 89	10	11.2	79	88.8	0.728	0.12
	10-12 weeks n= 61	8	13.1	53	86.9		
Gravida	Primigravida n= 58	9	15.5	49	84.9	0.29	1.108
	Multigravida n= 92	9	9.8	83	90.2		

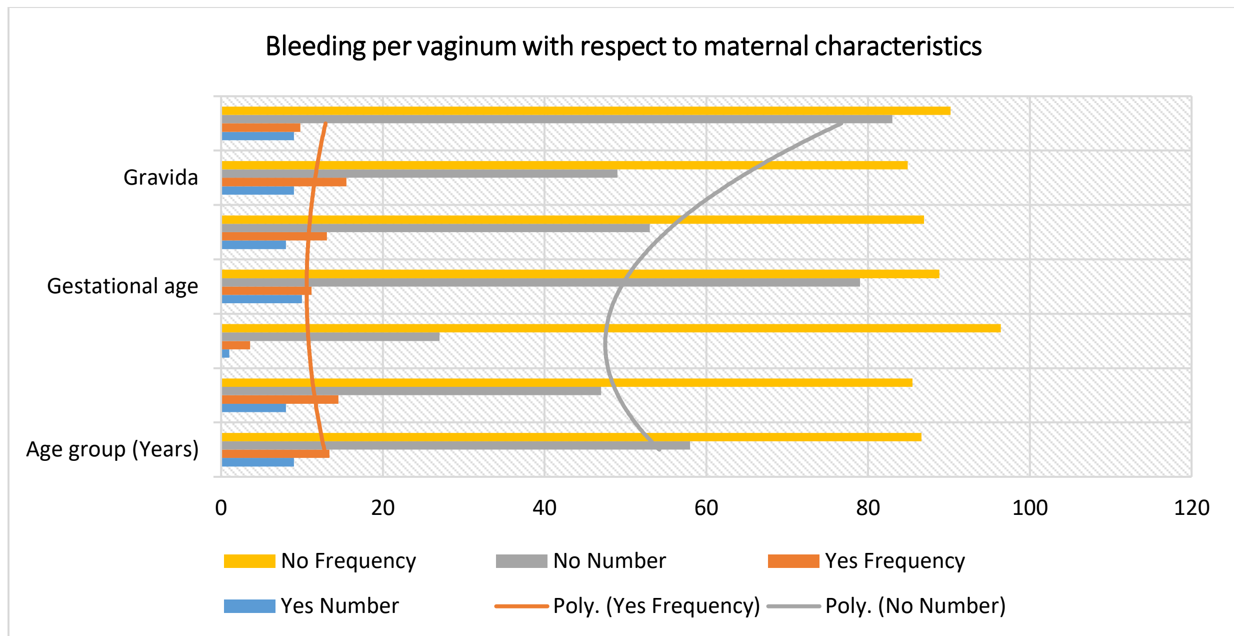
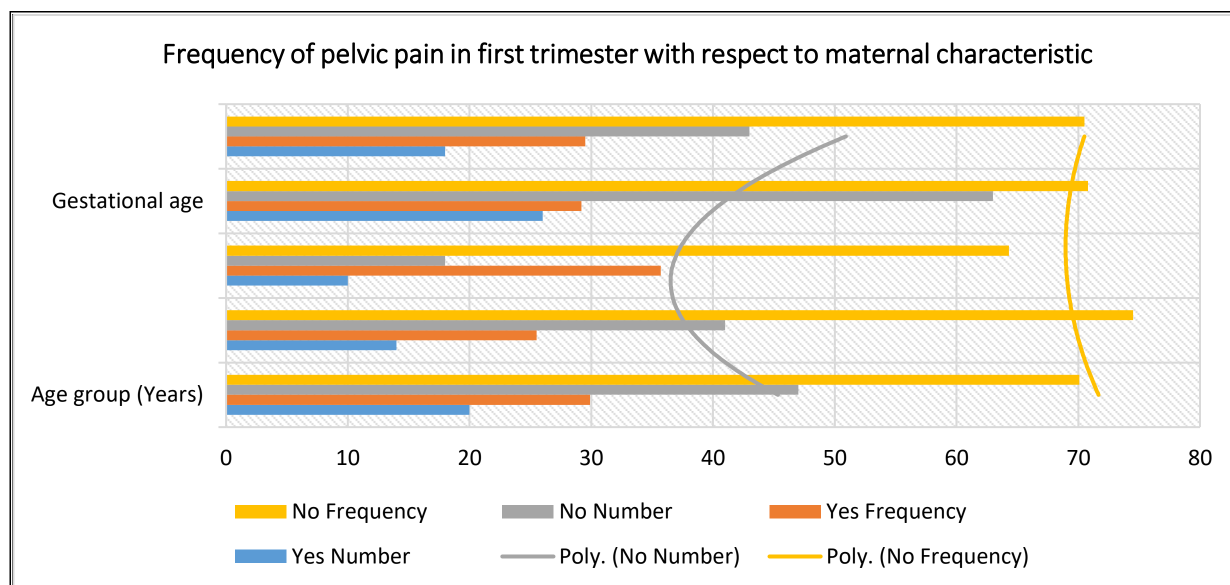


Table 4. Frequency of pelvic pain in first trimester with respect to maternal characteristic.

Characteristics		Pelvic Pain				p-value	OR
		Yes		No			
		Number	Frequency	Number	Frequency		
Age group (Years)	< 25 n= 67	20	29.9	47	70.1	0.61	0.95
	26 – 30 n= 55	14	25.5	41	74.5		
	>30 n= 28	10	35.7	18	64.3		
Gestational age	≤ 9 weeks n= 89	26	29.2	63	70.8	0.96	0.002
	10-12 weeks n= 61	18	29.5	43	70.5		



DISCUSSION:

A challenge that requires proper addressable is safe maternal health, mothers and children are under threat due to prevalent healthcare flaws. In the under developed countries health is dependent upon the services accessibility, affordability and availability [10]. Vaginal bleeding is experienced by 25% women in the 1st trimester and demise of the intrauterine fetal is faced by the fifty percent of the women in the 20th week of pregnancy [11]. Depression and anxiety are the main offshoots of these healthcare issues [12]. The causes of this bleeding are ectopic pregnancy, miscarriage and implantation bleed. The other contributing causes may include systemic disorder, polyp, liver disease and cervical ectopy [16]. Research included 150 pregnant women in the 1st trimester of pregnancy with the inclusion criteria as mentioned earlier. Below 25 years (44.67%), in the range of 26 – 30 years (36.67%) and above 30 years (18.67%) pregnant cases were included as shown in Table-I with a mean age of (26.33 ± 4.23) years including the gravida status. The ratio of primigravida and multigravida was respectively 58 (38.67%) and 92 (61.33%) cases. Mean gestational age was (8.57 ± 2.20) in the range of 5 – 12 weeks. Same outcomes were observed in the research of Reem Hasan [13]. Another repeated complication was abdominal pain caused by numerous reasons related to the surgical conditions and pregnancy. We observed that 29.33 percent women faced pelvic pain in the 1st trimester and higher percentage of women also experienced Low Back and Pelvic Pain (LBPP). According to Wang (2004), in the thousand pregnant cases 41 percent were recovered in their pelvic pain [14]. Higher incidence of pelvic pain was notices in the primigravida in comparison to the multigravida through stratification analysis. Sweden and USA also observed pelvic pain respectively 51 and 58.5 percent [15]. Asian countries are less educated about the PPGP (Pregnancy-Related Pelvic Girdle Pain). Asia and Africa have studies the issue of pelvic pain in the range of 38 – 8.9 percent. Because of the varying outcomes comparison is not possible with our research. According to Ananth, bleeding is associated to the pre-term birth, small-for-gestational age and low birth weight. William's also reports the same. Our outcomes observed per vaginal bleeding frequency during 1st trimester as 12%. Higher incidence of bleeding was observed in the 5th to 8th gestation week (Community Based Research, 2000). Heavy bleeding episodes subset has a same distribution for all the episodes of bleeding specially in the development of placental. There is a requirement of hormonal function of placenta for luteal to placental shift in in the production of progesterone which happens in the 7th gestation week. In addition to that, in the 10th pregnancy week the tropho-blast blockage of spiral arteries breaks down, occurrence of arteries remodeling is there and causes flow of blood for the placenta development and oxygen tension is increased. Every healthcare professional is to be aware about the stressing element of these complications to the pregnant women and they need to consider emotional response and individual differences.

We observed the links between the adverse outcomes and it is recommended that an early pregnancy assessment should be made for the timely diagnosis and treatment, same has been emphasized in the guidelines of the Obstetricians and Gynecologists Royal College, 2012 [16]. Because of the physical

changes the diagnosis if difficult at an early stage about the incidence of pelvic pain. Symptoms of peritonitis guarding may not be appreciated clearly in the elastic fib resin pregnancy. Moreover, appendix location may change because of the TLC (Total Leukocyte Count) and gravid uterus, which may reach up to 16000 / microliter (mcL) in the case of pregnancy. These signs need clear and careful assessment as they threat one's life. An inappropriate treatment causes complications and degraded results. Ante-natal services need to be organized right from the first day of maternal healthcare as preventive care system to counter higher morbidity cases specially in the under developed countries. These complications also cause extra burden on the healthcare budgeting. Early identification and diagnosis can help a lot such as the effectivity of the treatment and decreased costs for the lifesaving process in the tertiary healthcare units.

CONCLUSION:

Research concludes that significant women strength experienced vaginal bleeding and pelvic pain in the 1st trimester, for a practitioner it is important to practice sound diagnostic and clinical expertise for the treatment of pregnancy complications as these abnormalities are potent instrument of distress in the women and their partners. Sound clinical treatment and diagnosis is required for the skilled management of these issues in the 1st trimester of pregnancy.

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