MEDICAL CHANNEL

Original Article

FREQUENCY OF ABNORMAL UTERINE BLEEDING AMONGCASES OF HEPATITIS C VIRUS INFECTION IN A TERTIARY CARE HOSPITAL, KARACHI

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Received on: 11-07-2017
Accepted on: 27-11-2017

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ABSTRACT

Objective: To determine frequency of abnormal uterine bleeding among cases of hepatitis C viral infection in public sector hospital, Karachi **Methods:** This was across sectional study conducted in Obstetrics and Gynaecology Unit III, Civil Hospital Karachi, from October 2014 to April 2015. A total of 127 patients with Hepatitis C virus infection attending gynecology OPD within last six months were included in this study. Abnormal uterine bleeding patterns were observed from patient's history and finally were recorded on approved proforma. Data was analysed on SPSS version 15. Mean and standard deviations were reported for numerical variables and percentages for categorical variables.
Results: There were 127 women enrolled. The average age of the patients was 31.3±5.5 years. Frequency of abnormal uterine bleeding with hepatitis C virus infection was observed in 33.1% (42/127), in which menorrhagia was observed in 69.1% (29/42) cases, amenorrhea in 9.5% (4/42), oligomenorrheain 9.5% (4/42), metrorrhagia in 7.1% (3/42) and polymenorrheain4.8% (2/42). **Conclusion:** A high frequency 33.1% (42/127) of intra uterine bleeding (AUB) in patients with hepatitis C virus infection was observed. As one third of the sample was suffering from intra uterine bleeding AUB among hepatitis C virus infection, the study recommends that all patients presenting with abnormal uterine bleeding should be screened for hepatitis C virus infection in order to prevent unnecessary hysterectomies.

Key Words: Abnormal uterine bleeding, Amenorrhea, Menorrhagia, Oligomenorrhea, Metrorrhagiain, Polymenorrhea, Hepatitis C Viral infection

Med. Channel 2017; 23(4) 27-31

INTRODUCTION

Any bleeding from the uterus which is abnormal in quantity, duration, or schedule is termed abnormal uterine bleeding (AUB) and is one of the

commonest cause of gynaecological referral to the out patient department.[1] Women with abnormal uterine bleeding (AUB) typically present with a complaint of vaginal bleeding. There are many causes of genital tract bleeding, and the actual site must be determined. Commonly mistaken sites for uterine bleeding include the lower genital tract (vulva, vagina, or cervix), urinary tract, and gastrointestinal tract. AUB has major impact on women's quality of life, reproductively, and utilization of healthcare services. Intra uterine bleeding (AUB) is associated with local and systemic diseases and medications.[2] In non-pregnant women the commonest cause of AUB are structural pathologies such as fibroids, endometrial polyps, neoplastic lesions of genital tract. Adenomyosis and an ovulatory disorder. The characteristics of normal menstrual bleeding includes, occurrence at regular intervals with frequency of every 21 to 35 days,volume of blood less than or equal to 80ml and duration between two to eight days.[3] Any vaginal bleeding before menarche is considered abnormal except for self-limited, physiologic withdrawal bleeding that occurs in some newborns,. If women who are in their reproductive age experience uterine bleeding that is other than normal menstrual period will be considered as having abnormal uterine bleeding. Postmenopausal women are labelled as having abnormal uterine bleeding if they experience vaginal bleeding 12 months or more after the cessation of menses, or unpredictable bleeding in postmenopausal women who have been receiving hormone therapy for 12 months or more.[4]

Abnormal uterine bleeding may be associated with trauma, foreign body (e.g. toys, coins, or toilet tissue), infections, cancer or precancerous lesions of female genital tract. Non gynecological associations may include bleeding disorders such as Von Willebrand disease, platelet abnormalities or problems associated with clottingfactors, medical disorders such as liver disease or hypothyroidism,[5]

Coagulation disorders in liver disease may be due to multiple causes such as decreased synthesis of clotting and inhibitor factors, decreased clearance of activated factors, hyper fibrinolysis quantitative and qualitative platelet defects, and accelerated intravascular coagulation.[6]

The estimated global prevalence ofhepatitis C virus (HCV) infection is 2.2%, corresponding to about130 000 000 HCV-positive persons worldwide, < 1.0% in Northern Europe to >2.9% in Northern Africa, 0.01%-0.1% in the United Kingdom.[7] The frequency of hepatitis C infection in Pakistan is high (4.7%), varying from 0.4% - 33.7%. The frequency is significantly higher than in the neighboring countries.[8]

Several studies conducted in past have quoted other causes of AUB, but it is also recognized as a problem in patients with liver disorders .[9,10]As Hepatitis C virus infection has high prevalence in our country, this study was done to determine frequency of AUB among cases of hepatitis C virus infection in a tertiary care hospital, Karachi. As there are not many local study thus this study was conducted to provide current statistical data of AUB in Hepatitis C patients. If the study shows high frequency of AUB in HEP C patients, then we can treat patients accordingly and can save patients from unnecessary hysterectomy.

METHODOLOGY

This study was conducted in collaboration withHepatitis clinic at CHK in the Department of Gynecology / Obstetrics unit III, Civil Hospital Karachi, from October 2014 to April 2015.It was a hospital based cross sectional study. The targeted population were all the females with complainof abnormal uterine bleeding referred by hepatitis clinic. The inclusion criteria included women suffering from recently diagnosed HCV infection on PCR as HCV RNA positive and under treatment at hepatitis clinic between ages 20 to 51 years. The exclusion criteria included women with iatrogenic abnormal uterine bleeding, medical and endocrine disorders, genital tract pathology, infections, coagulation disorders and premalignant lesions, women with complications associated with advanced HCV viral infection were also excluded from the study. HCV viral infection was diagnosed on ICT (Immune-chromatography) and confirmed by ELISA. Further confirmation was performed by PCR. All the subjects were observed for their laboratory test including Blood Complete Picture including platelet count, liver function tests, coagulation profiles and Ultra sound whole abdomen and pelvis. These tests were performed to exclude any organic genital tract pathology as well as bleeding disorders among positive HCV cases to find the frequency of AUB after exclusion of all other factors in the sample size.

The sampling technique was non-probability consecutive and all cases of positive HCV with AUB were taken in this sample. Sample size was calculated by using WHO Sample size calculator, taking proportion

of AUB in Hepatitis C positive s at 30% [10], margin of error (d) 8%, Confidence interval 95%, the estimated sample size (n) calculated was 127.

Informed consent was taken from each patient. Pattern of abnormal uterine bleeding was observed from patient's history and was recorded on proforma.

The collected data was analyzed by using SPSS version16. Mean & standard deviation was calculated for age & duration of HCV. Frequency & percentages were calculated for AUB. Stratification with respect to age & duration of disease was done.

RESULTS

A total of 127 patients with HCV infection (diagnosed on ICT and confirmed by ELISA)were included in this study who presented in one year.

The mean age of the study group was 31.3 +4.1 months. Table 1 shows that of 127 women enrolled in the study 45.6% (58) were in the age group less than or equal to 30 years, 27.5% (35) were in the age group 31 to 35 years and 26.7% (34) were in the age group more than 35 years of age.

The mean duration of the disease was 6.5+4.1 months. As shown in table 1, fifty five percent (70) women of the study group have duration of disease less than or equal to 6 months whereas 44.8% (57) women had the disease for more than six month.

Frequency of abnormal uterine bleeding in the study group with hepatitis virus was 33.1% (42) where as 66.9% (85) of women had normal menstrual pattern.

Figure 1 shows frequencies of different patterns of bleeding in the study group. Amenorrhea was present in 9,5% cases similarly oligomenorrhea was also seen in 9.5% cases. Seven percent of women with hepatitis C enrolled in the study had menorrhagia whereas 4.5% women reported symptom of polymenorrhagia.

As shown in table 1, 25.9% (15) women with abnormal bleeding were less than or equal to 30 years of age and 32.4% (11) were more than 35 years. The percentage of women with abnormal bleeding in the age group 31 to 35 years was 45.7% (16).

Regarding duration of disease significant association was noted between frequencies of abnormal uterine bleeding 44.3% (p- value = 0.003) and duration of disease less than 6 months.

Regarding pattern of bleeding amenorrhea and oligomenorrhea were not observed in women who were less than 30 years old. The frequencies of oligomenorrhea in women with hepatitis C virus infection and abnormal bleeding were 12.5% (2) and

Table-I:

Frequency of abnormal uterine bleeding among cases of hepatitis C virus infection in a tertiary care hospital, Karachi (n=127).

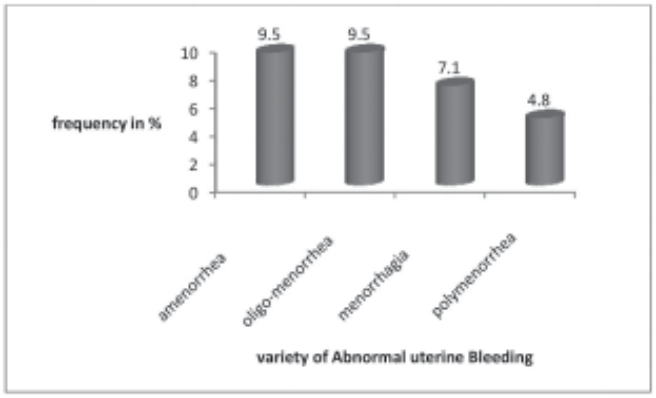
Age Groups (Years)	**Abnormal Uterine Bleeding**		**Total**
	Yes (n=42)	**No (n=85)**	
≤ 30Years	15(25.9%)	43(74.1%)	58
31 to 35 Years	16(45.7%)	19(54.3%)	35
>35 Years	11(32.4%)	23(67.6%)	34

Duration of disease (months)	**Abnormal Uterine Bleeding**		**Total**
	Yes (n=42)	**No (n=85)**	
≤ 6 Months	31(44.3%)	39(55.7%)	70
>6 months	11(19.3%)	46(80.7%)	57

Abnormal Uterine Bleeding Pattern	**Age Groups (Years)**		
	≤30 Years (n=15)	**31 to 35 Years (n=16)**	**>36 Years (n=11)**
Amenorrhea	0(0%)	2(12.5%)	2(18.2%)
Oligomenorrhea	0(0%)	4(25%)	0(0%)
Polymenorrhea	2(13.3%)	0(0%)	0(0%)
Menorrhagia	11(73.3%)	9(56.3%)	9(81.8%)
Metrorrhagia	2(13.3%)	1(6.3%)	0(0%)

Fig 1

Variety of abnormal uterine bleeding among cases of hepatitis C virus infection in a tertiary care hospital, Karachi



18.2% (2) in age group between 31 – 35 years age group more than 36 years respectively.

Oligomenorrhea had frequency of 25% (4) in women with abnormal uterine bleeding and age group between 31 to 35 years. No case of oligomenorrhea was noted in age group more than 36 years.

In women with hepatitis C virus and abnormal uterine bleeding, polymenorrhea was seen in 13.3% of women in age group less than or equal to 30 years. Polymenorrhea was not observed in women with age group between 31 to 35 years of age and more than 36 years of age.

Seventy three percent (11) women with abnormal uterine bleeding and age group less than or equal to 30 years had reported menorrhagia. Fifty six percent (9) was found to have menorrhagia in the age group between 31 to 35 years where as 81.8% (9) women in the age group more than 36 years had menorrhagia.

The abnormal bleeding pattern, metorrhagia was reported by 13.3% (2) in age group less than 30 years. Women with age group between 31 – 35 years had metorrhagia in 6.5% (1) cases. No women with age group more than 36 years and abnormal bleeding had metorrhagia.

DISCUSSION

Abnormal uterine bleeding reflects a disruption in the normalpattern of menstrual cycle. The bleeding pattern may be excessively heavy, light prolonged or frequent. Menstrual cycle may be ovulatory or an ovulatory, but ovulatory cycles are more common in adolescents and peri menopausal women. AUB management depends upon on the underlying etiology, and the amount of bleeding. The primary goals in management is prevention of complications, such as anemia and reestablishment of regular cyclical bleeding.[11]

A total of 127 patients with HCV infection (diagnosed on ICT and confirmed by ELISA) were included in this study. Most of the patients were around 30 years of age. The average age of the patients was 31.3±5.5 years. It has been reported in literature that approximately 20% of the affected individuals belong to the adolescent age group, and 50% are aged 40-50 years.[12] One of the population-based surveyof women ages 18 to 50 years in United States reported an annual prevalence rate of AUB of 53 per 1000 women.[13]AUB is important in respect to impact on women's quality of life, reproductively, and plus a burden on healthcare services.[14]

In healthy individuals there is adequate amounts of clotting factors, regulatory proteins, and platelets to achieve hemostasis. Women with liver disease, on the other hand, may have a disturbed balance between the pro-coagulant and anti-coagulant factors thus leading to abnormal coagulation cascade.[15-18]

The varying degrees of disruption of various factors like decreased levels of the liver-synthesized natural anticoagulant proteins C and S, production of non-endothelial cell-derived coagulation factors and decreased ant-thrombin levels plus decreased plasminogen has been noted in patients with hepatitis C viral infection which leads to different and potentially changing hemostatic activity. In present study, out of 127 patients, frequency of abnormal uterine bleeding was observed in 33.07%.

In our study menorrhagia was the commonest type of abnormal uterine bleeding that was observed in 69.1% (29/42) cases. In Liver diseases, blood disorders of platelets or coagulation could be thepossible causes, of menorrhagia in hepatitis C patients.[19-21]Affected individuals may not receive a diagnosis because many of these disorders cause limited symptoms and so could not be diagnosed until surgery, childbirth, or other common procedures result in excessive bleeding. In this study other patterns of abnormal uterine bleeding in hepatitis C patients was found to be very low i.e. amenorrhea was 9.5% (4/42), oligomenorrhea9.5% (4/42), metorrhagia 7.1% (3/42) and polymenorrhea 4.8% (2/42).

According to the study conducted in County Emergency Clinical Hospital of Constanta: women with

Hepatitis C showed metorrhagia (59.8%) and menorrhagia (40.2%),[9] but in our study menorrhagia was observed in 69.07% and metorrhagia 7.14%. The difference may be due to different patient population. According to a study conducted in Postgraduate Medical Institute Lady Reading Hospital, Peshawar, Pakistan, 30% women with HCV infectionhad Abnormal Uterine Bleeding (AUB)[10]These results are comparable to our study, showing 33.07% frequency of AUB with hepatitis C infection.

CONCLUSION

One third of the sample (42/127) was suffering from AUB among hepatitis C virus infection therefore study recommends that all female patients presenting with abnormal uterine bleeding in which structural cause has been excluded should be screened for hepatitis C virus infection and liver dysfunction so that unnecessary hysterectomies are avoided.

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Author's Contributions:
***** She conceived design, data collection and did statistical analysis. ****** Editing of manuscript and manuscript writing ******* Review and editing of the manuscript.

Conflict of interest: Author declare None conflict of interest.