ORIGINAL ARTICLE

PREVALENCE OF DYSFUNCTIONAL UTERINE BLEEDING IN PATIENTS WITH SUB FERTILITY

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ABSTRACT

Background: Dysfunctional uterine bleeding is the idiopathic complication in premenopausal females or females that have chance to get pregnancy. It can have significant impact on quality-of-life of female and also lead to several complications including subfertility.

Objective: To determine the frequency of dysfunctional uterine bleeding in patients presenting with problem of sub-fertility.

Method: It is a Cross sectional study, has been conducted at Department of Obstetrics & Gynaecology, Lahore General Hospital, Lahore, from July to October 2020 for 3 months. Sample size of 150 patients were enrolled in the study through Non-Probability, Consecutive Sampling. Patients of age 20-40 years, presented with diagnosis of subfertility were included. Then females were evaluated for presence of dysfunctional uterine bleeding. Data was recorded on proforma and analyzed by using SPSS version 22.

Results: The mean age of females was 32.56 ± 8.93 years. The mean BMI of females was 29.61 ± 12.43 kg/m^2. The mean duration of marriage was 8.94 ± 3.47 years. There were 97 (65%) females with primary subfertility while 53 (35%) females had secondary subfertility. Out of 150 females, dysfunctional uterine bleeding was noted in 69 (46%) females while 81 (54%) females did not have dysfunctional uterine bleeding. In females with primary subfertility, dysfunctional uterine bleeding was observed in 38 (39.2%) females. In females with secondary subfertility, dysfunctional uterine bleeding was observed in 31 (58.5%) females. The difference was significant ($p<0.05$).

Conclusion: Though this study, we found significantly high frequency of dysfunctional uterine bleeding in females with subfertility. Also, the frequency of dysfunctional uterine bleeding was significantly higher in females with secondary subfertility as compared to primary subfertility.

Key words: Dysfunctional Uterine Bleeding, subfertility, primary, secondary.

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INTRODUCTION

Subfertility is inability to conceive the pregnancy after one year of regular unprotected intercourse.[1] Females are more prone to subfertility and its incidence differs extensively in different geographic locations globally. There were about 48.5 million couples diagnosed for infertility during 2010 all over the world and the lowest rate of infertility were observed in countries of South American region i.e., Peru, Ecuador & Bolivia, and also in Poland, Kenya & Korea. While the highest frequency was observed in regions like Eastern Europe, Oceania, North Africa, Middle East, and Sub-Saharan African countries. Overall, the frequency of primary subfertility has been increased during last three decades, but the frequency of secondary subfertility has been reduced. Although the rates of subfertility decreased in females in high-income countries including Eastern / Central Europe, and Central Asia.[2] In Asian region, the highest rates of combined primary and secondary subfertility was in South Central region, followed by Southeast region, and lowest rates in Western regions.[3]

Dysfunctional uterine bleeding is a common finding in sub-fertile females. It is defined as the abnormal vaginal bleeding that may occur without presence of any

pathology or lesion of reproductive system in female. It is a common complication in females of reproductive age group and may lead to several complications including subfertility. Dysfunctional uterine bleeding can have significant impact on quality of life of female and also increase the substantial financial burden.[4]

Symptoms of dysfunctional uterine bleeding include the irregular bleeding form uterine occurs through vagina. It is mostly idiopathic i.e., absence of pathology or disease. It imitates the disturbance in normal pattern of ovulatory hormonal stimulation cycle to endometrium. Dysfunctional uterine bleeding may be unpredictable in several ways. It may be extremely heavy or mild, long-term, repeated, or random. Generally, this syndrome is associated with anovulatory menstrual cycles, but it can also present in females with oligo-ovulation. Dysfunctional uterine bleeding can occur in the absence of any detectable pelvic pathology, general medical condition or pregnancy.[5-6]

The prevalence of dysfunctional uterine bleeding is high and can be determined in around 5-10% females in a gynecological outpatient setting. It is one of the most commonly faced gynecological problem. It has been estimated that annually, around 5% females of age range 30-49 years have to consult the gynecologist for management of menorrhagia or dysfunctional uterine bleeding, and overall 30% females present with complaint of dysfunctional uterine bleeding. [7]

The aim of the study is to determine the frequency of dysfunctional uterine bleeding in females with sub-fertility. It has been observed that dysfunctional uterine bleeding is a common indicator for disturbance in reproductive cycle of a female. In routine, several females with complaint of infertility are also found to have dysfunctional uterine bleeding. So, there is a need to determine whether the dysfunctional uterine bleeding is significantly higher in infertile females and associated with subfertility in young females. So, we want to conduct this study to attain the local evidence and implement the screening of females with subfertility for dysfunctional uterine bleeding to plan improved management protocols in order to avoid unnecessary complications due to dysfunctional uterine bleeding during treatment of subfertility.

METHODS

It is a Cross sectional study, has been conducted at Department of Obstetrics & Gynaecology, Lahore General Hospital, Lahore, from July to October 2020 for 3 months Data of n = 150 females was estimated by keeping confidence level ($Z_{1-\alpha/2}$) at 95%, margin of error at (d) 5% and taking expected percentage of dysfunctional uterine bleeding (p) i.e., 10% in females with subfertility. Study was conducted using Consecutive Sampling technique (non-probability).

Patients of age 20-40 years, presented with subfertility were included. Female were those females who had chronic hypertension, uncontrolled diabetes, renal dysfunction, bleeding disorders, anemia were excluded from the study.

150 females fulfilled the selection criteria were recruited in the study through OPD of gynecology department. Written consent form was obtained and demographics like age, BMI, duration of marriage, area of residence, education and socioeconomic status were recorded. Then females were asked for type of subfertility i.e. primary or secondary. Then females were evaluated for any disturbed menstrual cycle, or blood flow rate. If females reported about amenorrhea, heavy menstrual bleeding, frequent bleeding (>2 times during one month), then dysfunctional uterine bleeding was noted. Females were managed as per standard protocols. Data was recorded on proforma and analyzed by using SPSS version 22.

RESULTS

The mean age of females was 32.56 ± 8.93 years. There were 59 (39.3%) females of age <30 years and 91 (60.7%) females had age ≥30 years. The mean BMI of females was 29.61 ± 12.43 kg/m^2. The mean duration of marriage was 8.94 ± 3.47 years. Ninety-nine (66.0%) females were coming from urban region while 51 (34%) came from rural region. There were 67 (44.7%) illiterate females, 38 (25.3%) females had education up to primary, 25 (16.7%) were matric pass, while 20 (13.3%) females had education more than matric. Out of 150 females, 74 (49.3%) females belong to low socioeconomic class, 52 (34.7%) females belong to middle class family while 24 (16.0%) females belong to high class family. There were 97 (65%) females with primary subfertility while 53 (35%) females had secondary subfertility. Table 1

Table 1: Demographics of patients

Characteristic	Mean ± SD, f (%)
N	150
Age (yeas)	32.56 ± 8.93
<30 years	59 (39.3%)
≥30 years	91 (60.7%)
BMI (kg/m^2)	29.61 ± 12.43
Duration of marriage (years)	8.94 ± 3.47
Area of residence	
Urban	99 (66.0%)
Rural	51 (34.0%)
Education	
Illiterate	67 (44.7%)
Primary	38 (25.3%)
Matric	25 (16.7%)
Above matric	20 (13.3%)
Socioeconomic Status	
Low	74 (49.3%)
Middle	52 (34.7%)
High	24 (16.0%)
Type of subfertility	
Primary	97 (65%)
Secondary	53 (35%)

Table 2: Comparison of Dysfunctional uterine bleeding in type of subfertility groups.

		Type of subfertility		Total
		Primary	Secondary	
Dysfunctional uterine bleeding	Yes	38 (39.2%)	31 (58.5%)	69 (46%)
	No	59 (60.8%)	22 (41.5%)	81 (54%)
Total		97 (100%)	53 (100%)	150 (100%)

P-value = 0.023 (Significant)

Out of 150 females, dysfunctional uterine bleeding was noted in 69 (46%) females while 81 (54%) females did not have dysfunctional uterine bleeding. Figure 1

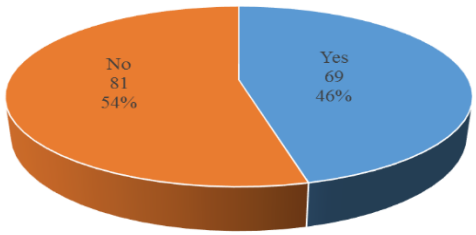

Figure 1: Distribution of dysfunctional uterine bleeding

In females with primary subfertility, dysfunctional uterine bleeding was observed in 38 (39.2%) females. In females with secondary subfertility, dysfunctional uterine bleeding was observed in 31 (58.5%) females. The difference was significant ($p<0.05$). Table 2

DISCUSSION

The frequency of subfertility in developed countries is around 20%. In Pakistan, the reported frequency of subfertility is about 21.9% in females of reproductive age group, out of which 3.5% had primary while 18.4% had secondary subfertility. According to findings of a study, conducted in Pakistan, 8% female population has to face the fertility problems, while among them, 90% can be cured by proper treatment while only 10% can be incurable or complicated.[8] But generally, in Pakistan, most of females with problem of subfertility patients take the alternate methods of treatment or medicines or visit the un-trained health practitioners for the management of subfertility. This causes further deterioration the condition and delay in the appropriate treatment.[9] When the pharmacological treatment fails to provide the satisfactory relief, few surgical interventions, like hysterectomy or endometrium destruction, ma be applied.[15, 16] anemia, infertility, subfertility and endometrial carcinoma are the major complications of prolonged dysfunctional uterine bleeding. If the dysfunctional uterine bleeding is not managed and supportive care is not initiated on time, severe anaemia, hypotension, shock, and even death can occur.[17, 18]

Although the effect of systemic factors for dysfunctional uterine bleeding are extensively recognized for subfertility, including ovulatory dysfunction, the degree to which the endometrial conditions and distinct structural lesions affect the subfertility are not exclusively understood. More researches are required to determine the effect of structural deformities and their therapy on succeeding fertility consequences in females with dysfunctional uterine bleeding.[19, 20] There are numerous studies conducted to examine the relationship of dysfunctional uterine bleeding with subfertility, in spite of evolving evidences that several causes, involved in dysfunctional uterine bleeding effects the fertility in females.[10]

Dysfunctional uterine bleeding is the most common condition faced by females and gynecologists. It affects around 20-30% of females of reproductive or premenopausal age.[11] Around one third of young females will have to face the dysfunctional uterine bleeding in their lives, with abnormalities mostly occurs at the time of menarche and peri-menopausal stage. The normal menstrual cycle has the frequency of 24-38 days, which lasts for 7-9 days, and about 5-80 ml of blood loss occurs during a normal cycle.[12] Alterations in any of above stated four features of a normal menstrual cycle may lead to dysfunctional uterine bleeding. [13]

In our study, were observed that there were 97 (65%) females with primary subfertility while 53 (35%) females had secondary subfertility. Out of 150 females, dysfunctional uterine bleeding was noted in 69 (46%) females while 81 (54%) females did not had dysfunctional uterine bleeding. In females with primary subfertility, dysfunctional uterine bleeding was observed in 38 (39.2%) females. In females with secondary subfertility, dysfunctional uterine bleeding was observed in 31 (58.5%) females. The difference was significant ($p<0.05$).

Internationally, the prevalence of dysfunctional uterine bleeding in females of reproductive age group has been estimated around 3-30%. The incidence may rise during age of menarche or at peri-menopausal stage of life. Many epidemiological studies defined dysfunctional uterine bleeding as heavy menstrual bleeding. But when the irregular and frequent (intermenstrual) bleeding was considered as feature of dysfunctional uterine bleeding, the overall prevalence of dysfunction uterine bleeding increased to around 35% or more.[13] Many Females do not take proper treatment for symptoms of dysfunctional uterine bleeding, and few features of diagnosis are objective while others are subjective, making it difficult to estimate the exact prevalence.[14]

CONCLUSION

Though this study, we found significantly high frequency of dysfunctional uterine bleeding in females with subfertility. Also, the frequency of dysfunctional uterine bleeding was significantly higher in females with secondary subfertility as compared to primary subfertility. Now, we have got the evidence and now we recommend the females with subfertility to be screened

for dysfunctional uterine bleeding in order to detect and control the complications of dysfunctional uterine bleeding or if any pathology present that may lead to more hazardous consequences due to excessive blood loss.

LIMITATIONS

Study was carried out on 150 females. However, authenticity of results can improve with larger sample size and more findings can be elaborated. Only one parameter i.e., dysfunctional uterine bleeding was assessed. Also, females were not followed-up and no follow-up findings were recorded also further complications of dysfunctional uterine bleeding or treatment were not assessed.

SUGGESTIONS / RECOMMENDATIONS

Further studies can be done on larger sample size to obtain more authentic results. Multi-centric studies can also be done to obtain more authentic results. More parameters including pathological causes of dysfunctional uterine bleeding must be screened in order to find any existing relationship and related complications can also be assessed in future studies.

ETHICAL APPROVAL

The study was approved by the Ethical Review Committee of Postgraduate Medical Institute / Ameer-ud-Din Medical College/Lahore General hospital, Lahore via Research No. 00-11-21 Dated: July 09, 2021.

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AUTHOR'S CONTRIBUTIONS

RT: Manuscript Writing
SMAFZ: Supervision
MI, MJ: Data collection
SSU: Data Analysis