

Causes of Abnormal Uterine Bleeding in Females of Reproductive Age Group attending Gynaecology Department of University of Lahore Teaching Hospital

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ABSTRACT

Background: Abnormal uterine bleeding is a prevalent problem that prompts a female to seek medical help. The most common symptom of abnormal uterine bleeding is heavy menstrual bleeding. The impact of abnormal uterine bleeding on one's quality of life is important.

Aim: To determine the causes of abnormal uterine bleeding.

Methods: This cross-sectional study was conducted at Department of Gynaecology University of Lahore Teaching Hospital Lahore over a period of one year from Nov 2020 to Nov 2021. Eighty females of reproductive age with Abnormal Uterine Bleeding were selected. All females were examined for the etiology of abnormal uterine bleeding. The females with menstrual blood loss lasting >8 days, passage of blood clots or haemoglobin concentration < 10 gm/dl were enrolled. The exclusion criteria includes the females less than 20 years of age, or with pubertal menorrhagia or postmenopausal females.

Results: Out of total eighty females, 25% females belong to 42 years age group. The most prevalent etiology of abnormal uterine bleeding was fibroid uterus i.e. 62.5% cases, followed by adenomyosis (15%), endometrial polyp (10%) and endometrial hyperplasia (12.5%). Fifty females (50%) were multipara, 20 (25%) were grand multipara and 10(12.5%) were great grand multipara. Severe anemia was noted in almost 10 females (12.5%), moderate anemia in 56 cases (70%) and mild anemia in 14 cases (17.5%). Transabdominal scan was done to confirm the diagnosis of fibroid uterus, adenomyosis, endometrial hyperplasia and endometrial polyp.

Conclusion: Fibroid uterus was the commonest cause in females presenting with abnormal uterine bleeding to University of Lahore Teaching Hospital affecting quality of life in females and causing psychological problems.

Keywords: Abnormal uterine bleeding, Menorrhagia, Metrorrhagia, Fibroid uterus, Endometrial polyps.

INTRODUCTION

Abnormal uterine bleeding is uterine bleeding which is abnormal in frequency, regularity, duration and volume. It accounts for almost 50% gynecologic problems among females¹. The International Federation of Gynecology and Obstetrics recommends referring to any alteration in a woman's monthly frequency, volume, regulation, or duration as abnormal uterine bleeding. Some often used terminology, such as menorrhagia, polymenorrhagia, dysfunctional uterine bleeding, and hyper/hypomenorrhea, are also dropped since they are poorly understood and defined. PALM-COEIN [Polyp, Adenomyosis, Leiomyoma, Malignancy, Hyperplasia, Coagulopathy, Ovulatory dysfunction, Endometrial, Iatrogenic, and Not yet identified causes] is an acronym used by the International Federation of Gynecology and Obstetrics to describe the reasons of abnormal uterine bleeding. The abbreviation's first component refers to structural uterine causes, while the second part is limited to non-structural causes, which are more common in our community¹⁻³.

Ovulatory dysfunction is the most common cause of abnormal uterine bleeding in adolescents. Anovulation occurs due to immaturity of the hypothalamic-pituitary-ovarian axis, hypothalamic hypogonadism or endocrine disorders involving polycystic ovarian syndrome. During anovulatory cycles, the corpus luteum is not formed therefore progesterone is not produced during the second half of the menstrual cycle. As estrogen promotes proliferation of endometrium, but non-production of progesterone causes abnormality and this lead to irregular bleeding or heavy menstrual bleeding⁴⁻⁸.

The most common clinical manifestation of abnormal uterine bleeding is heavy menstrual bleeding. Previously known as dysfunctional uterine bleeding is abnormal uterine bleeding that is

not caused by a structural uterine defect.⁹ Due to a lack of understanding and neglect, menorrhagia, or heavy menstrual bleeding, is a serious concern among women, resulting in psychological problems. The goal of my research was to look into the causes of menorrhagia in women and the effects it has on their health. Menorrhagia is described as heavy cyclic uterine bleeding of more than 80ml occurring at regular intervals across numerous cycles or chronic bleeding lasting > 8 days¹⁰⁻¹².

The National Institute for Health and Clinical Excellence (NICE) defines heavy menstrual bleeding as an excessive monthly blood loss that interferes with a woman's physical, social, emotional, and/or material quality of life, as described by the International Federation of Gynecology and Obstetrics. (13, 14) Heavy menstrual bleeding is characterised by the need to change sanitary pads every 1 - 2 hours or more than seven times a day, the necessity to change protection throughout the night, blood clots larger than 2 cm, the use of double protection (pad and tampon), anaemia, and low ferritin levels^{5,15,16}.

Risk factors for menorrhagia includes age, Uterine fibroids, Adenomyosis and Endometrial polyp¹⁷⁻¹⁹. Platelet dysfunction, like Von Willebrand's disease is more common among females with heavy menstrual bleeding^{10,20}. The common anatomical causes in premenopausal women causing menstrual irregularity are submucous fibroid and uterine polyps. Other local causes are polycystic ovarian disease, adenomyosis, hypothyroidism and hyperthyroidism, congenital anomalies of uterus, intrauterine devices, endometrial hyperplasia, adenocarcinoma and uterine vascular malformation²¹⁻²⁷.

The initial evaluation of a female with heavy menstrual bleeding is done by detailed history, physical examination, relevant investigations and radiological imaging. Menstrual history including menstrual regularity, duration of cycle and number of pads soaked per day should be accurately noted. Symptoms of anemia (like

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dizziness and fatigue) must be inquired. Any systemic causes of menorrhagia such as PCOS, obesity, hyperprolactinemia, hypothyroidism should be ruled out on history. Family history of hormone sensitive tumours or coagulopathy should be noted. Females with history of excessive bleeding and non-diagnostic testing must be referred to hematologist for further examination. Per-abdominal, Per-speculum and bi-manual examination reveal significant finding in various pathologies^{1,2}.

The haemoglobin level is determined by a complete blood count, which can also be used to track treatment with haematinics. A peripheral blood smear, ferritin level, prothrombin time, activated partial thromboplastin time, and fibrinogen level are all essential tests. Ultrasonography is non-invasive technique used to define genital tract structural anomalies, measures endometrial thickness and rules out polycystic ovaries. Ultrasound is first line imaging technique used in assessment of female pelvis. Ultrasound can differentiate between benign and malignant pathologies by the evaluation on gray-scale ultrasound and can often make a specific diagnosis on the basis of sonographic appearance. Trans-abdominal approach is preferred to identify pelvic pathology whereas the transvaginal ultrasound is used as the first line in females of reproductive age group as it is efficient in identifying pelvic pathologies. In case of endometrial carcinoma, transvaginal ultrasound is used to assess depth of myometrial invasion and Doppler is used to evaluate vascularity³⁻⁷.

An abdomino-pelvic ultrasound is a useful investigation in diagnosing masses which can be missed on per-abdominal examination in obese females. An endometrial sampling should be done in females around 40 years with certain risk factors including obesity, using hormonal therapy or tamoxifen⁸. The main goals in management of abnormal uterine bleeding includes correction of anemia, ensuring hemodynamic stability and maintenance of regular menstrual cycle. Conservative treatment options used includes iron supplementation, combined contraceptives, progesterone, non-steroidal anti-inflammatory drugs, anti-fibrinolytics, desmopressin and GnRH analogues⁹.

Surgical interventions such as diagnosis under anesthesia, or endometrial sampling or curettage may be important in cases when medical therapy has failed within 24-36 hours, or in a life-threatening emergency.(10-13) The National Institute for Health and Care Excellence approves hysterectomy as 2nd line of therapy for bleeding after failure of pharmacological, hormonal treatment and less invasive procedures¹⁴.

METHODOLOGY

After permission from IRB this cross-sectional study was conducted at Gyneacology Department of University of Lahore Teaching Hospital, Lahore for about 12 months i.e. from Nov 2020 to Nov 2021. Eighty females with abnormal uterine bleeding of reproductive age were studied. Informed consent was taken and purpose of the study was explained to all participants. A proforma was used to record age, parity, duration, quantity and pattern of bleeding, the per day use of sanitary pads, any associated symptoms such as dysmenorrhea, history of hormonal treatment or an intrauterine contraceptive device. Abdominal & pelvic examination was carried out and the females were accordingly investigated. The females coming to outpatient department with complaint of menstrual blood loss lasting >8 days, passage of blood clots or haemoglobin concentration < 10gm/ dl were included in the study. The exclusion criteria includes the females less than 20 years of age, or with pubertal menorrhagia or postmenopausal females.

RESULT

In our study, the commonest age group was 42 years (25%). Regarding the causes of abnormal uterine bleeding, the most common etiology was fibroid uterus which was observed in 62.5% cases, followed by adenomyosis (15%) cases, endometrial polyp (10%) cases and endometrial hyperplasia (12.5%) cases (Table 1).

Considering parity 50 females (50%) were multipara, 20(25%) were grand-multipara and 10(12.5%) were great grand-multipara (Table 2). All of them were anemic at the time of presentation (Table 2). Severe anemia was noted in almost 10 females (12.5%), moderate anemia in 56 cases (70%) and mild anemia in 14 cases (17.5%).

Table 1: Causes of abnormal uterine bleeding

Common cause	F
Fibroid	50 (62.5%)
Adenomyosis	12 (15.0%)
Endometrial Hyperplasia	10 (12.5%)
Endometrial Polyp	8 (10.0%)
Total	80

Table 2: Parity of females with abnormal uterine bleeding

Parity	F
Multipara	50 (62.5%)
Grand-multipara	20 (25.0%)
Great grand multi	10 (12.5%)
Total	80

Table 3: Anemia in females with abnormal uterine bleeding

Anemia	F
Severe	10 (12.5%)
Moderate	56 (70.0%)
Mild	14 (17.5%)
Total	80

DISCUSSION

The etiologies of abnormal uterine bleeding may be often diagnosed solely on careful history taking and outpatient examination but majority of cases requires more detailed evaluation. In this study, all females with abnormal uterine bleeding had significant findings on examination and investigation which is not in favour of a study carried out by Mazhar et al., where clinical assessment do not revealed any cause of abnormal uterine bleeding¹⁵.

In our study, out of eighty females, the commonest cause of abnormal uterine bleeding was leiomyoma, which was found in 62.5% cases. The results of our study were comparable with the findings narrated by Shagufta Shaheen et al., in their prospective study which reported leiomyoma in 47.10% cases.(16) Adenomyosis was found in 15% females pre-operatively on ultrasonography who underwent hysterectomy when presented with abnormal uterine bleeding. In another study, adenomyosis was reported to be correctly diagnosed in 10% females with abnormal uterine bleeding¹⁷.

In our study, adenomyosis was found in 14% of hysterectomy specimens histopathology. Shagufta Shaheen et al study revealed adenomyosis in 30.05% cases. Endometrial hyperplasia occurs when the endometrium is exposed to continuous oestrogen therapy, unrestricted by progesterone therapy. The diagnosis of endometrial hyperplasia must be suspected in a female with prolonged, frequent or irregular bleeding. The abnormal uterine bleeding in perimenopausal females is the commonest presentation of endometrial cancer although it may be due to benign pathology in 80% females. In our study the frequency of endometrial hyperplasia was noted in 12.5% comparable to the findings of study conducted by Ara et al and Steiner et al^{17,18}.

CONCLUSION

Abnormal uterine bleeding is a common complaint in females which affects the quality of life. Fibroid uterus is the most common cause of abnormal uterine bleeding found mostly in multiparous females causing anemia leading to disturbed quality of life and psychological illnesses in females.

Conflict of interest: Nil

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