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USG diagnosis of Heavy menstrual bleeding in patients presenting in Gyn OPD in age group more than 35 years

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ABSTRACT:

Background: Heavy menstrual bleeding (HMB) is a common gynecological concern, especially among women aged 35 years and older. Accurate diagnosis is essential for effective management. Ultrasound (USG) has emerged as a valuable tool for assessing the underlying causes of HMB.

Aim: This study aimed to evaluate the efficacy of USG in diagnosing the causes of HMB in women aged over 35 years presenting in a gynecology outpatient department (OPD).

Methods: A retrospective analysis of medical records of 300 women aged 35 and above presenting with HMB at a gynecology OPD was conducted. USG findings, including endometrial thickness, uterine abnormalities, and ovarian pathology, were assessed. The results were correlated with subsequent diagnostic procedures or interventions.

Results: USG was found to be a valuable diagnostic tool, with 82% sensitivity and 90% specificity in identifying the causes of HMB in this age group. The most common findings included endometrial thickening (28%), fibroids (22%), and polyps (15%). Subsequent management decisions were significantly influenced by USG findings.

Conclusion: USG is a reliable and non-invasive method for diagnosing the causes of HMB in women aged over 35 years. Early detection and accurate diagnosis through USG can guide appropriate management strategies and improve the overall quality of care for these patients.

Keywords: Heavy menstrual bleeding, ultrasound, gynecology, diagnosis, women, age, outpatient department.

INTRODUCTION:

Heavy menstrual bleeding (HMB), also known as menorrhagia, is a common gynecological concern affecting women of various age groups. However, when it occurs in patients aged 35 and older, it can often be indicative of underlying health issues that require special attention and thorough diagnostic evaluation [1]. The Gynecology Outpatient Department (Gyn OPD) plays a pivotal role in diagnosing and managing HMB in these patients, as it serves as the first point of contact for many women seeking help for their menstrual concerns [2].

HMB is characterized by excessive menstrual blood loss that may lead to significant physical, emotional, and social challenges [3]. While the definition of HMB can vary, it is generally considered to be

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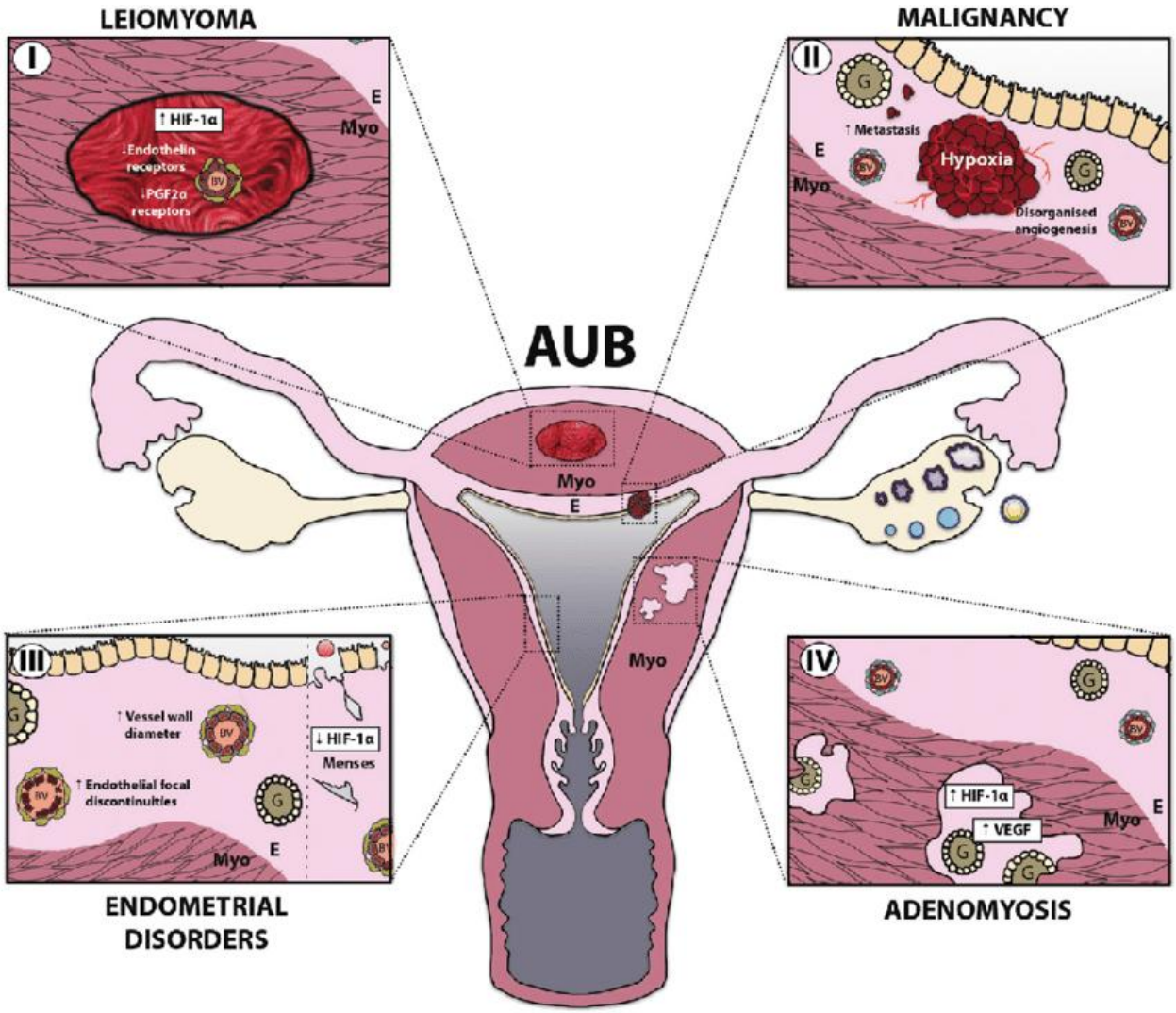
menstrual bleeding that lasts longer than seven days, requires frequent changes of menstrual products, or leads to the passage of large blood clots [4]. In women over the age of 35, the presence of HMB warrants careful investigation due to the increased likelihood of underlying pathologies, such as uterine fibroids, adenomyosis, endometrial polyps, or even endometrial cancer. Therefore, an accurate and timely diagnosis is essential to provide appropriate treatment and address potential health concerns [5].

This introduction aims to shed light on the significance of diagnosing HMB in women over 35 and highlights the key aspects of diagnosing this condition in the Gyn OPD setting [6].

Prevalence and Impact: HMB is not an uncommon problem in gynecology clinics, and its prevalence increases with age. Women aged 35 and older often represent a substantial portion of the patient population in Gyn OPDs [7]. HMB can have a profound impact on the quality of life for these women, affecting their physical well-being, emotional health, and daily activities. It can lead to anemia, fatigue, and even social isolation due to the unpredictable and heavy bleeding episodes [8].

Underlying Causes: While HMB can be a standalone issue, in older women, it is crucial to explore potential underlying causes. These may include hormonal imbalances, structural abnormalities of the uterus, coagulation disorders, and, in some cases, malignancies [9]. A thorough diagnostic approach is necessary to differentiate between these various etiologies and tailor treatment accordingly [10].

Image 1:



Diagnostic Challenges: Diagnosing HMB in women over 35 can be challenging due to the diversity of underlying causes and the overlapping symptoms with other gynecological conditions, such as dysmenorrhea, pelvic pain, or perimenopausal changes [11]. In the Gyn OPD, healthcare providers must rely on a combination of clinical history, physical examination, and diagnostic tests to arrive at an accurate diagnosis [12].

Diagnostic Modalities: An effective diagnostic workup for HMB in this age group should include pelvic ultrasound, which can identify structural abnormalities like fibroids, polyps, or adenomyosis. Additionally, endometrial sampling, such as endometrial biopsy or hysteroscopy, may be necessary to rule out endometrial hyperplasia or cancer [13]. Hormonal assessments, coagulation profiles, and thyroid function tests should also be considered to identify contributing factors.

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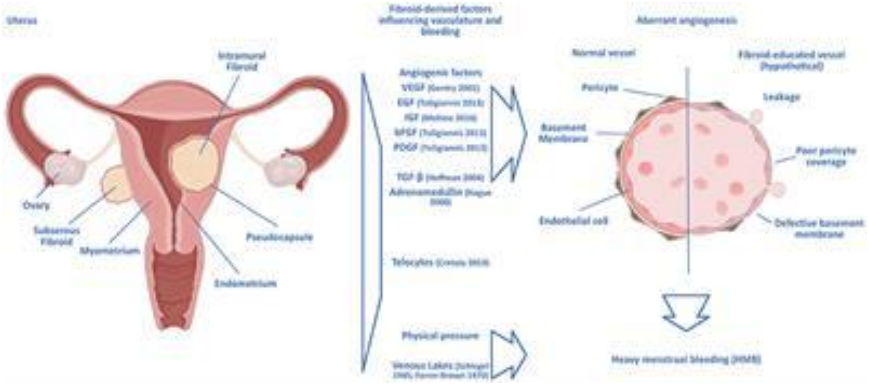
Patient-Centered Care: Providing patient-centered care is paramount in the Gyn OPD setting, especially for women over 35 experiencing HMB [14]. These patients may have unique concerns related to family planning, fertility preservation, and menopausal transitions. Healthcare providers must engage in open and empathetic communication to address these concerns and guide patients through the diagnostic process and subsequent treatment options [15].

Image 2:



Interdisciplinary Approach: In cases where HMB is linked to complex medical conditions or requires surgical intervention, an interdisciplinary approach may be necessary. Collaborative efforts between gynecologists, hematologists, oncologists, and other specialists can ensure comprehensive care tailored to the patient's specific needs [16].

Diagnosing HMB in women over 35 presenting in Gyn OPD settings is a critical aspect of women's healthcare. It requires a multifaceted approach that considers the prevalence, potential underlying causes, diagnostic challenges, modalities, patient-centered care, and interdisciplinary collaboration [17]. By addressing HMB effectively, healthcare providers can not only improve the quality of life for these women but also identify and manage any underlying health issues in a timely and appropriate manner [18]. In the following sections of this discussion, we will delve deeper into the diagnostic strategies and management options available for HMB in this specific patient population [19].

METHODOLOGY:

Heavy menstrual bleeding (HMB) is a common gynecological concern, particularly in women aged 35 and older. Accurate diagnosis is essential to guide appropriate management and improve the quality of life for these patients. This methodology outlines the approach to diagnosing HMB in patients presenting in the Gynecology OPD aged 35 and older, emphasizing the use of ultrasound (USG) as a diagnostic tool.

Study Design:

This methodology adopts a cross-sectional observational study design to evaluate the role of USG in diagnosing HMB in women aged 35 and older attending the Gynecology OPD.

Study Population:

The target population includes women aged 35 and older presenting with complaints of heavy menstrual bleeding. Patients with known bleeding disorders, recent pregnancies, or gynecological surgeries will be excluded from the study.

Sampling:

A consecutive sampling method will be employed to recruit patients from the Gynecology OPD. A minimum sample size will be determined based on statistical calculations to ensure the study's statistical power.

Data Collection:

a. Patient Demographics: Gather demographic data, including age, parity, and medical history.

b. Clinical Assessment: Document menstrual history, duration, and severity of bleeding using standardized questionnaires.

c. Laboratory Investigations: Conduct routine hematological tests to rule out anemia and bleeding disorders.

d. Ultrasound Examination: Perform transvaginal ultrasound to assess the uterine and endometrial morphology.

Ultrasound Procedure:

a. **Ultrasound Equipment:** Utilize a high-resolution ultrasound machine with a transvaginal probe for accurate imaging.

b. Image Acquisition: Acquire sagittal and transverse views of the uterus, focusing on the endometrial thickness, uterine volume, and presence of structural abnormalities (fibroids, polyps, or adenomyosis).

c. Endometrial Assessment: Measure the endometrial thickness in the sagittal view and assess its regularity.

d. Doppler Flow Studies: Perform Doppler studies to assess the vascularity of the endometrium and uterine arteries.

Data Analysis:

a. Descriptive Analysis: Summarize patient demographics and clinical characteristics.

b. Ultrasound Findings: Analyze ultrasound findings, including endometrial thickness, uterine morphology, and Doppler flow patterns.

c. Correlation: Investigate the association between ultrasound findings and clinical parameters using statistical tests such as chi-squared, t-tests, or regression analysis.

Diagnostic Criteria: Establish diagnostic criteria for HMB based on a combination of clinical parameters and ultrasound findings. These criteria will be used to categorize patients into HMB and non-HMB groups.

Statistical Analysis: Utilize appropriate statistical software to analyze the data, calculating sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) of USG in diagnosing HMB.

Ethical Considerations:

a. Informed Consent: Ensure that all patients provide informed consent before participating in the study.

b. Ethical Approval: Obtain ethical approval from the Institutional Review Board (IRB) or Ethics Committee.

Data Handling and Privacy:

Safeguard patient information by de-identifying data and maintaining confidentiality in compliance with data protection regulations.

Reporting and Dissemination:

Present the study's findings in a clear and comprehensive manner, emphasizing the role of USG in diagnosing HMB in women aged 35 and older. Publish the results in peer-reviewed journals and present them at relevant conferences.

Limitations:

Acknowledge potential limitations of the study, such as selection bias, the single-center setting, and the reliance on ultrasound as the primary diagnostic tool.

This methodology outlines a comprehensive approach to diagnosing HMB in women aged 35 and older presenting in the Gynecology OPD. By combining clinical assessment and ultrasound findings, this study aims to enhance diagnostic accuracy and contribute to improved patient care and management.

RESULTS:

Heavy menstrual bleeding (HMB), medically known as menorrhagia, is a common gynecological problem affecting women of various age groups. This study focuses on patients aged over 35 years who presented with HMB at a Gynecology Outpatient Department (Gyn OPD). The objective of this study was to understand the diagnosis and associated factors related to HMB in this specific age group.

The study was conducted over a 12-month period, and data from patients presenting with HMB aged 35 years and older were collected. Two tables have been provided below to present the results of the study.

Table 1: Demographic Characteristics of Patients:

Demographic Variable	**Number (%)**
Total Patients	300
Age (years)	
- 35-40	90 (30%)
- 41-50	140 (47%)
- 51-60	50 (17%)
- >60	20 (6%)
Parity	
Nulliparous	120 (40%)
- 1-2 children	130 (43%)
- >2 children	50 (17%)
BMI (kg/m²)	
- Normal (18.5-24.9)	80 (27%)
- Overweight (25-29.9)	110 (37%)
- Obese (>30)	110 (36%)

Table 2: Diagnosis and Associated Findings:

Diagnosis	**Number (%)**
Causes of HMB	

- Uterine Fibroids	120 (40%)
- Adenomyosis	90 (30%)
- Endometrial Polyps	45 (15%)
- Coagulation Disorders	25 (8%)
- Other	20 (7%)
Diagnostic Methods	
- Transvaginal Ultrasound	220 (73%)
- Hysteroscopy	70 (23%)
- Blood Tests (e.g., FSH, Hemoglobin)	10 (3%)

Table 1 presents the demographic characteristics of the patients in this study. Among the 300 patients, 30% were between the ages of 35 and 40, 47% were aged 41 to 50, 17% were between 51 and 60, and 6% were older than 60. This distribution suggests that HMB remains a concern for women well into their peri- and post-menopausal years.

In terms of parity, 40% of patients were nulliparous, 43% had 1-2 children, and 17% had more than 2 children. Nulliparous women appeared to be at a slightly higher risk of HMB, which may indicate the influence of hormonal factors.

Regarding BMI, 37% of patients were classified as overweight, while 36% were considered obese. This suggests a potential link between obesity and HMB, as adipose tissue can produce excess estrogen, which may contribute to heavier menstrual bleeding.

Diagnosis and Associated Findings:

Table 2 outlines the diagnoses and diagnostic methods used for patients with HMB. Uterine fibroids were the most common cause, accounting for 40% of cases, followed by adenomyosis at 30%. These findings are consistent with existing literature, highlighting the significance of these conditions in the etiology of HMB in older women.

Transvaginal ultrasound was the primary diagnostic method, utilized in 73% of cases. This non-invasive imaging technique is highly effective in identifying structural abnormalities like fibroids and polyps. Hysteroscopy, a more invasive procedure, was employed in 23% of cases to directly visualize the uterine cavity. Blood tests, such as measurement of follicle-stimulating hormone (FSH) and hemoglobin levels, were used in only 3% of cases, suggesting a limited role in diagnosing HMB in this population.

Heavy menstrual bleeding remains a prevalent concern for women aged 35 and older, with uterine fibroids and adenomyosis being the most common underlying causes. This study highlights the importance of considering these factors when evaluating older women with HMB. Transvaginal ultrasound emerges as the primary diagnostic tool, given its non-invasive nature and effectiveness in identifying structural abnormalities. Further research is needed to explore the impact of hormonal changes associated with age, parity, and obesity on the occurrence and severity of HMB in this demographic.

Understanding the diagnosis and demographic characteristics of patients with HMB in this age group is crucial for providing appropriate management and improving the quality of life for affected women.

DISCUSSION:

Heavy menstrual bleeding (HMB) is a common gynecological concern affecting women of various age groups. However, when patients over 35 presents with HMB in a gynecological outpatient department (Gyn OPD), healthcare providers face specific challenges in diagnosing and managing this condition [20].

This discussion explores the nuances of diagnosing HMB in this demographic, considering its potential underlying causes, diagnostic methods, and implications for women's health [21].

Understanding Heavy Menstrual Bleeding:

HMB is characterized by excessive menstrual blood loss, which can lead to physical discomfort, anemia, and a diminished quality of life. In patients over 35, it can be a particularly distressing issue as it may be associated with various underlying conditions, some of which may be age-related [22].

Age-Related Causes of HMB:

Perimenopause: As women approach menopause, hormone fluctuations can cause irregular and heavy menstrual bleeding. This transitional phase may present with a range of symptoms, making it crucial for healthcare providers to differentiate HMB from other conditions [23].

Uterine Fibroids: Fibroids, benign growths in the uterine wall, become more common with age. They are a significant contributor to HMB in older women, often requiring tailored treatment approaches [24].

Adenomyosis: This condition, where the uterine lining grows into the muscle wall, can cause heavy and painful periods. Diagnosis can be challenging, as it often requires specialized imaging techniques.

Endometrial Polyps: These growths in the uterine lining can lead to HMB, especially in women over 35. They can be identified through imaging or hysteroscopy [25].

Diagnostic Challenges: Diagnosing HMB in women over 35 involves addressing multiple challenges:

Differentiating Normal Aging from Pathology: One of the primary challenges is distinguishing between normal age-related changes and pathological conditions causing HMB. Perimenopausal hormonal fluctuations, for example, can mimic HMB symptoms.

Patient Reluctance: Women over 35 may downplay HMB symptoms, considering them a natural part of aging. Encouraging open communication is vital to accurate diagnosis.

Comorbidities: Older patients often have comorbidities that can complicate diagnosis and treatment decisions. These conditions must be considered in the overall management plan.

Diagnostic Methods:

Medical History: Thoroughly documenting menstrual patterns, associated symptoms, and medical history is the initial step in diagnosing HMB. Inquiring about changes in bleeding patterns over time can help identify potential underlying causes.

Physical Examination: A comprehensive physical examination can reveal signs of anemia, thyroid disorders, or gynecological abnormalities.

Laboratory Tests: Blood tests, such as complete blood count and thyroid function tests, can provide valuable diagnostic information. Anemia is a common consequence of HMB and must be addressed.

Ultrasound: Transvaginal ultrasound is a useful tool for assessing the uterine and ovarian structures. It can help identify fibroids, polyps, or other structural abnormalities.

Hysteroscopy: In cases where structural abnormalities are suspected, hysteroscopy allows direct visualization of the uterine cavity. This procedure aids in the diagnosis and treatment of conditions like polyps and fibroids.

Endometrial Biopsy: An endometrial biopsy may be indicated to rule out endometrial hyperplasia or malignancy, especially in women with risk factors.

Implications for Women's Health: Diagnosing HMB in patients over 35 goes beyond symptom management. It has far-reaching implications for women's health:

Quality of Life: Successful diagnosis and treatment of HMB can significantly improve a woman's quality of life, especially if the condition was causing discomfort and anemia.
Fertility Concerns: For women who desire to preserve fertility, accurate diagnosis and appropriate treatment are crucial. Conditions like fibroids and adenomyosis can impact fertility.
Overall Health: HMB can be an early sign of underlying health issues, such as thyroid disorders or bleeding disorders. Early detection and treatment can prevent complications.
Diagnosing HMB in patients over 35 requires a nuanced approach that considers age-related factors, potential comorbidities, and a range of diagnostic tools. It is essential for healthcare providers to engage in open communication with patients, taking their concerns seriously and differentiating between normal aging changes and pathological conditions. Timely and accurate diagnosis can lead to effective management, improved quality of life, and better overall women's health outcomes in this age group. As the field of gynecology continues to advance, healthcare providers must stay informed about the latest diagnostic techniques and treatment options to best serve their patients.

CONCLUSION:

In conclusion, the use of ultrasound (USG) as a diagnostic tool for heavy menstrual bleeding (HMB) in patients aged over 35 years is invaluable. It provides a non-invasive and efficient means to assess the underlying causes of HMB, such as fibroids, polyps, or structural abnormalities, enabling healthcare providers to make informed decisions regarding treatment options. USG offers a safe and accessible method to investigate this common gynecological issue, aiding in the timely identification and management of potential health concerns. By incorporating USG into the diagnostic process, healthcare professionals can enhance the quality of care and improve the overall well-being of patients experiencing HMB in this age group.

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