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New ground breaking International Federation of Gynecology and Obstetrics's classification of abnormal uterine bleeding: Optimizing management of patients

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Abstract

There is considerable worldwide confusion in the use of terminologies and definitions around the symptom of abnormal uterine bleeding (AUB), and these are increasingly leading to difficulties in setting up multinational clinical trials and in interpreting the results of studies undertaken in single centers. In November 2010, the International Federation of Gynecology and Obstetrics formally accepted a new classification system for causes of AUB in the reproductive years. The system, based on the acronym polyps, adenomyosis, leiomyoma, malignancy and hyperplasia – coagulopathy, ovulatory disorders, endometrial causes, iatrogenic, not classified was developed in response to concerns about the design and interpretation of basic science and clinical investigation that relates to the problem of AUB.

Keywords: Abnormal uterine bleeding, classification, malignancy

INTRODUCTION

Abnormal uterine bleeding (AUB) in women of reproductive age may be due to a wide range of disorders or pathologies. There is a great confusion in the way terminologies for AUB were used and there was an urgent need for international agreement on consistent use of terms and definitions for symptoms, signs, and causes of AUB.[1,2]

Until now, there has been no universally accepted method for classifying such patients, which has impeded basic science and clinical investigation, as well as the practical, rational, and consistent application of medical and surgical therapy. As the result of a stringent 5-year review process, a multinational group of clinician – investigators with broad experience in the investigation of AUB, has now agreed on a classification system to facilitate multi-institutional investigation into the epidemiology, etiology, and treatment of women with acute and chronic AUB.[3]

The international federation of gynecology and obstetrics (FIGO) has approved a new classification system (polyps, adenomyosis, leiomyoma, malignancy and hyperplasia – coagulopathy, ovulatory disorders, endometrial causes, iatrogenic, not classified [PALM-COEIN]) for causes of AUB in non-gravid women of reproductive age. The new system, which is published in the June issue of the International Journal of Gynecology and Obstetrics, facilitate basic science and clinical research, as well as the practical, rational, and consistent application of medical and surgical treatments.[1]

Beginning with workshops in 2005, contributors from more than 17 countries on 6 continents developed the PALM-COEIN (pronounced “pam-koin”) classification system for causes of AUB in the reproductive years.[1] The basic system comprises 9 categories: The first 4 are defined by visually objective structural criteria PALM; a second 4 that are unrelated to structural anomalies COEI, and a final category reserved for entities that are not yet classified (N). A draft system was developed and revised, distributed for comments, and then discussed at a face-to-face meeting held in association with the 2009 FIGO World Congress in Cape Town, South Africa.

The PALM group

The PALM categories refer to discrete (structural) entities that can be measured visually with imaging techniques, such as sonography and/or histopathology testing. The “polyp” category lends itself to the development of a sub-classification for clinical or investigative use based on a combination of variables, including polyp dimension, location, number, and morphologic and histologic features. The “leiomyoma” category is subdivided into patients with at least 1 submucosalmyoma and those with myomas that do not affect the endometrial cavity. Within the “malignancy and hyperplasia” group, it was proposed that malignant or premalignant lesions, such as atypical endometrial hyperplasia, endometrial carcinoma, and leiomyosarcoma, be categorized as such within the major category, but further described with use of existing World Health Organization and FIGO classification and staging systems.

The COEIN group

In contrast to the PALM group, the COEIN group includes non-structural entities that are not defined on imaging or histopathology testing. The “iatrogenic” category refers to AUB associated with the use of exogenous gonadal steroids, intrauterine systems or devices, or other systemic or local agents.

WHAT IS NEW? STUDY HIGHLIGHTS

- AUB includes menstrual bleeding that is abnormally heavy or abnormal in timing.
- The classification system does not include abnormal bleeding related to pathologic conditions of the lower reproductive tract.
- The term dysfunctional uterine bleeding should be replaced by coagulopathy, endometrial dysfunction, and ovulatory disorders.
- Heavy menstrual bleeding should replace menorrhagia to describe excess menstrual bleeding.
- Intermenstrual bleeding that occurs between clearly defined cyclic and predictable menses should replace the term metrorrhagia.
- Chronic AUB is defined as bleeding from the uterine corpus that is abnormal in volume, regularity, or timing; is present for most of the prior 6 months; and requires immediate intervention.
- Acute AUB is defined as an episode of heavy bleeding requiring immediate intervention.
- The acronym for the 9 categories of the classification system is PALM-COEIN: Polyp, adenomyosis, leiomyoma, malignancy and hyperplasia, coagulopathy, ovulatory dysfunction, endometrial, iatrogenic, and not yet classified.
- PALM components can be assessed visually by imaging techniques or histopathology testing.
- COEIN components are not structural.
- Polyps (endometrial and endocervical) are categorized as absent or present, as defined by one or a combination of ultrasound and hysteroscopic imaging with or without histopathology testing.
- Adenomyosis-minimal criterion is identification on ultrasound testing.
- Leiomyoma, or benign fibromuscular tumors of the myometrium, is the preferred term instead of myoma or fibroid.

- Leiomyoma-minimal criterion is identification on ultrasound testing.
- The leiomyoma secondary classification system categorizes lesions as “submucosal” versus “others:” Submucosal types are 0 (pedunculated intracavitary), 1 (< 50% intramural), and 2 (≥ 50% intramural).
- Other types are 3 (contacts endometrium, 100% intramural), 4 (intramural), 5 (subserosal ≥ 50% intramural), 6 (subserosal < 50% intramural), 7 (subserosal pedunculated), and 8 (includes cervical or parasitic and other lesions not related to the myometrium).
- The leiomyoma tertiary classification system for hybrid lesions describes the endometrial relationship first and serosal relationship second, separated by a hyphen.
- The leiomyoma classification does not yet include the size of the uterus, single longest measurement, location, and number of lesions.
- Malignancy and hyperplasia would be referred to as AUB-M, with sub-classification according to the WHO or FIGO system.
- Coagulopathy occurs in approximately 13% of women with heavy menstrual bleeding. [4,5]
- Ovulatory dysfunction can lead to amenorrhea or heavy menstrual bleeding.
- Ovulatory disorders can occur because of endocrinopathies, iatrogenic causes, or at adolescence or transition to menopause.
- Endometrial disorders are likely to occur when other abnormalities are excluded in the presence of normal ovulatory function.
- Iatrogenic causes include “breakthrough bleeding” during use of single or combined gonadal steroid therapy, intrauterine systems or devices, systemic agents that interfere with dopamine metabolism, or anticoagulant drugs.
- Not yet classified causes include rare or ill-defined conditions: Chronic endometritis, arteriovenous malformations, and myometrial hypertrophy.
- The full notation of classification would include the entire acronym AUB PALM-COEIN with the abnormalities noted, whereas the abbreviated notation would include only the abnormalities.
- AUB can be assessed by a β -subunit of human chorionic gonadotropin, duration and timing of flow, hemoglobin or hematocrit, serum progesterone levels, evaluation of the uterus on ultrasound testing, screening transvaginal ultrasound test of the endometrial cavity, and evaluation for coagulopathies with use of structured history as screening.

Practical, feasible system

FIGO Chief Executive Hamid Rushwan said, “There is no existing classification of the causes of these common gynecologic symptoms that allows good communication between practicing clinicians and researchers, and which encourages focus on the optimal approaches to modern management. Therefore, FIGO is pleased to have a role in facilitating the use of this ground-breaking new classification worldwide.”

RECOMMENDED APPROACH FOR EVALUATION OF AUB

The diagnosis of chronic AUB requires unpredictability, excessive duration, abnormal volume, and/or abnormal frequency of menses for at least the previous 6 months. Structured history should determine ovulatory function, potential related medical disorders, medications, and lifestyle factors that might contribute to AUB. [6]

Subsequent appropriate investigation may be based in part on the future fertility desires of the patient. Ancillary testing should include hemoglobin and/or hematocrit, testing for conditions that could contribute to an ovulatory disorder (thyroid function, prolactin levels, and serum androgen levels), and either referral to a hematologist or appropriate tests for von Willebrand's disease if a structured history suggests

coagulopathy.

The developers of the new system intended it for practical and feasible use by clinicians in most countries worldwide to readily and consistently classify patients with AUB. Because of lack of availability in many countries, the use of magnetic resonance imaging (MRI) for characterization of structural lesions of the uterus was not feasible; therefore, use of MRI was not included as a mandatory tool to classify patients with chronic AUB.[6,7]

However, clinicians should continue to use MRI if it is considered to be necessary and is available, and they should use the results of MRI scans to determine the presence or absence of adenomyosis when classifying a patient according to the present PALM-COEIN system.

FIGO classification – The on-going process: Regular modifications needed

“It is recognized that the system will require periodic modification and occasional substantial revision depending on advances in knowledge and technology, and increasing availability of investigative options across geographic regions,” the study authors write. “Consequently, we recommend a scheduled systematic review of the system on a regular basis by a permanent committee of an international organization such as FIGO, which has already endorsed the establishment of a suitable on-going Working Group on Menstrual Disorders.”

In an accompanying special editorial by Dr. Munro, Dr. Hilary O. D. Critchley, and Dr. Ian S. Fraser they further re-emphasized that The FIGO classification is regarded as a flexible “living” document that should undergo review and consideration for modification at regular intervals. It is suggested that discussion of the practical use and clarity of the classification should initially occur at 3-yearly intervals – in line with each FIGO World Congress.[8]

CONCLUSIONS

It seems clear that the development of consistent and universally accepted nomenclature is a step toward rectifying inconsistent terminologies used for AUB. Another advantage is the development of a classification system for the causes of AUB, which can be used by clinicians, investigators, and even patients themselves to facilitate communication, clinical care, and research.

There was universal agreement that poorly defined terms of classical origin used in differing ways in the English medical language should be discarded and that these should be replaced by simple, descriptive terms with clear definitions which have the potential to be understood by health professional and patient alike and which can be translated into most languages.

The major recommendations were to replace terms such as menorrhagia, metrorrhagia, hyper-menorrhoea and dysfunctional uterine bleeding. Suggestions for potentially suitable replacement terms and definitions are made.[8]

Investigators in the field are encouraged to use the system in the design of their AUB-related research because it is an approach that should improve our understanding and management of this often perplexing clinical condition.

FIGO also believes that the classification should be used widely in undergraduate and post-graduate education to facilitate the development of practitioners who are able to provide quality care for women with AUB.

VIEW POINT

There has been a considerable worldwide confusion about the various terminologies about AUB causing

difficulties in planning and conducting proper studies and in comparing results of different studies. The FIGO initiative about uniform classification for AUB is laudable and hopefully shall become successful like their FIGO classification of various gynecological cancers, which have been universally accepted throughout the world. It will enable the clinicians and researchers to plan proper study and clinical trial about AUB. It will generate uniform scientific and clinically relevant data all over the world to enhance our knowledge and understanding about this common condition. Hence, the new classification is welcome and we urge all gynecologists to start using the new classification and terminology. On the flip side, some clinicians may find the new terminology and classification difficult in their day to day clinical practice and may not use it routinely. There is a risk that the PALM COIN terminology and classification may have the same fate as the pelvic organ prolapse quantification classification for the genital prolapse which though is good and quantified but has not become very popular.

We sincerely hope that the next classification becomes a routine in clinical practice.

Footnotes

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Conflict of Interest: None declared.

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