

RESEARCH ARTICLE

Heavy menstrual bleeding awareness among Saudi female population and clinical implications

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Abstract

Background: Heavy menstrual bleeding (HMB) is a common clinical problem. However, seeking medical advice might be delayed until patients develop several clinical consequences.

Aim: To assess the prevalence and awareness of HMB among the Saudi female population and measures that are commonly used to control the bleeding.

Method: This is a cross-sectional study where a trained study team member carried out a survey. The survey includes patient demographics and medications history, comorbidities, blood transfusion, and patient perception about her period. HMB was defined as bleeding lasting >7 days, flooding or changing protection more than every 2 hours, and passing clots >1 in. in diameter.

Results: Four hundred and thirty-one women were evaluated for HMB with a median age of 27.72 ± 7.75 . Out of the total number, 281 (65.2%) females were identified to have HMB. Among these 281 females, only 35.6% were aware of having HMB, whereas 64.4% either unaware or unsure about having it. For those who were aware of having HMB, only 32% seek medical advice, particularly gynecology clinic though 46.6% were not satisfied with offered management. On the other hand, 28% and 3.9% of those unaware of having HMB did required iron supplementation and blood transfusion, respectively.

Conclusion: HMB is a major clinical problem though awareness about having HMB lacks regardless of the age and education level. Raising awareness and a multi-disciplinary approach may result in early diagnosis, early intervention, and reduction of clinical consequences.

KEYWORDS

heavy menstrual bleeding, hysterectomy, iron deficiency

1 | INTRODUCTION AND BACKGROUND

The menstrual cycle is a normal physiological process for all reproductive-age women.¹ Heavy menstrual bleeding (HMB) is an

excessive menstrual blood loss of more than 80 mL of blood per cycle, which could affect females physically, socially, and emotionally.² One in 20 women between 30 and 49 years of age visits primary health care complaining of significant menstrual loss each year.^{3,4}

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Several methods were established to assess HMB. For instance, pictorial blood loss assessment charts (PBACs) were first presented by Higham et al in 1990 that includes a series of diagrams representing varying soaked tampons or towels. A score of 100 or more is diagnostic for hemorrhages with a sensitivity and specificity of more than 80%. However, the PBAC can predict HMB but is not considered as a quantitative measurement.^{5,6} However, there are many factors to predict HMB, such as clots >1 in. in diameter, low ferritin, and flooding "overflow bleeding through the pad."^{7,8}

International Federation of Gynecology and Obstetrics (FIGO) established a classification system for the causes of abnormal uterine bleeding (AUB) that was first published in 2011. AUB's causes are distributed into nine main categories outlined as structural and non-structural abnormalities, along with one category of unclassified causes.^{9,10} Ovulation abnormality is commonly occurring with an endocrine disorder at the adolescence and the perimenopause stage.¹¹ Up to 20% of females with HMB diagnosed with a bleeding disorder, most widely von Willebrand disease.^{12,13}

The purpose of HMB treatment is to reduce the bleeding. The decision of specific therapy for HMB is based on the patient's age, etiology, and planning for conception. Therefore, management of HMB can be hormonal, hemostatic, or surgical with knowing that hysterectomy is the definitive treatment.¹¹

To our knowledge, that studies addressing a HMB issue in our area are lacking. Therefore, this study aimed to assess the prevalence and awareness of HMB among the Saudi female population and measures that are commonly used to control the bleeding.

2 | METHOD

The College of Medicine Institutional Review Board at King Faisal University, Saudi Arabia, approved this study. This is a cross-sectional study where a survey was carried out in 2020, where participants were given informed consent followed by 10 to 15 minutes interview by a trained study team member. The survey includes participants' demographic in the form of age, gender, level of education, comorbidities, detailed menstrual history, and participants' perception about their period along with measures, if any, that used to control a heavy period. Additionally, it also includes whether participants were on an iron supplement or have received blood components because of a heavy period.

Systematic random sampling was applied to select the participants from the adult Saudi female population between the age of 18 and 45. Participants were explained the purpose of the study, the use of data, the benefits of doing this research, the right to participate, complete the survey or not, and the confidentiality and anonymity of the data.

Data were collected and analyzed using the International Business Machines (IBM) Statistical Package for the Social Sciences version 22 (SPSS). The descriptive analysis was done to show mean, median, and mode values with SD for quantitative data. The categorical data were analyzed, and chi-square was used to assess any

association among different variables. A *P*-value cut-off point of .05 at a 95% confidence interval (CI) was considered significant for the statistical procedure.

3 | RESULTS

Four hundred and thirty-one women were evaluated for having HMB using the defining criteria mentioned above. The participants' ages range from 18 to 45 years, with a median age of 27.72 ± 7.75. Demographic and general characteristics are shown in Table 1.

Out of the total number, 281 (65.2%) females were identified to have a heavy menstrual period.

Among these 281 females, only 100 (35.6%) women aware that they do have HMP, whereas 170 (60.49%) and 11 (3.91%) women either unaware or unsure about having HMP, respectively (Figure 1). However, there was no significant relationship between the level of awareness and education level (*P*-value is .43 > .05). Additionally, there was no significant relationship between the level of awareness and participants' age (*P*-value is .053 > .05). Of note, changing tampons less than 3 hours was the most frequent manifestation of HMP (64.9%), while a period of more than 7 days was the least frequent one (46.2%).

TABLE 1 Demographic and general characteristics

| Variables | Subjects N (281) | |
|-------------------------------|--------------------------|-------------|
| Median age (range) years | 27 (18-45) | |
| Level of education | Higher | 201 (71.5%) |
| | Intermediate school | 15 (5.3%) |
| | Secondary school | 61 (21.7%) |
| | Primary school | 4 (1.4%) |
| Chronic disease | Sickle cell disease | 10 (3.6%) |
| | Sickle cell trait | 2 (0.7%) |
| | G6PD deficiency | 8 (2.85%) |
| | Iron deficiency anemia | 1 (0.4%) |
| | Anemia not yet diagnosed | 10 (3.6%) |
| | Bleeding disorders | 1 (0.4%) |
| | Hypertension | 3 (1.1%) |
| | Diabetes mellitus | 1 (0.4%) |
| | Eczema | 3 (1.1%) |
| | Asthma | 6 (2.1%) |
| | Crohn's disease | 1 (0.4%) |
| | Hypothyroidism | 1 (0.4%) |
| Total | 48 (17.1%) | |
| Contraceptive use | Yes | 41 (14.6%) |
| | No | 240 (85%) |
| Anticoagulant or antiplatelet | Yes | 16 (5.7%) |
| | No | 265 (94.3%) |

For those who were aware of having HMP, only 32% seek medical advice, particularly gynecology clinics though 46.6% were not satisfied with given management. Of those who seek medical help, only 21% offered management, mainly in the form of oral hormonal therapy. Simultaneously, the rest were treated with cauterization, hysterectomy, dilation, and curettage (Figure 2). On the other hand, 28% and 3.9% of those unaware of having HMP did require an iron supplement and blood transfusion, respectively.

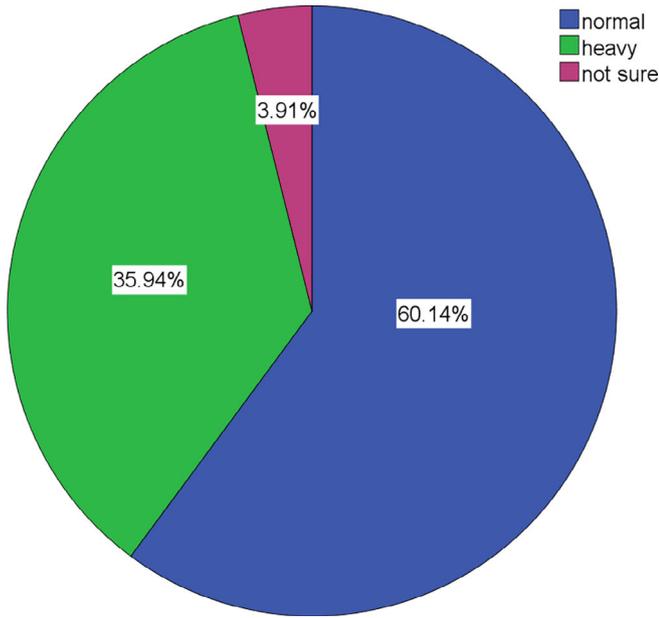


FIGURE 1 Perceptions of participants about their menstrual bleeding

4 | DISCUSSION

HMB is a major clinical problem and a frequent reason to visit primary health care physicians. HMB's prevalence ranges from 10% to 35%, but this is very variable from one area to another. This is likely attributed to methods used for assessment HMB.^{14,15} A study reported by Bitzer and Serrani found a low level of awareness of HMB among the survey participants, and 34% of the study population did not hear about HMB or did not know about it. According to the same study, 59% of the patients described the above-than-average menstrual bleeding as normal menstruation.¹⁶ Our study showed that around two-thirds (65.2%) of female populations in our community do have HMB, which is about twice that mentioned in the previous reports.

Nevertheless, only one-third were aware of it. Additionally, the level of awareness is poorly correlated with age and level of education. Interestingly, frequent sanitary protection changes were the most frequent HMB presentation, and those who are having these symptoms or flooding were more likely to admit having HMB.

There is a paradoxical relationship between menstrual blood loss (MBL) and hemoglobin levels.¹⁷ Therefore, whenever HMB is prolonged or becomes more frequent, this could result in anemia, poor quality of life, hemodynamic instability, frequent hospitalizations, need for blood transfusion, along with the use of oral and intravenous treatment.¹⁸ Similarly, the present study showed that 28% and 3.9% of unaware participants did require an iron supplement and blood transfusion, respectively. This means that these patients were treated symptomatically without being informed that HMB is the underlying cause of anemia. This is indirectly reflecting that some physicians are either unaware of the definition of HMB or do not routinely investigate for the underlying cause of anemia.

Low serum ferritin is predictive of excessive menstrual blood, and an iron deficiency could exist with or without anemia is common in

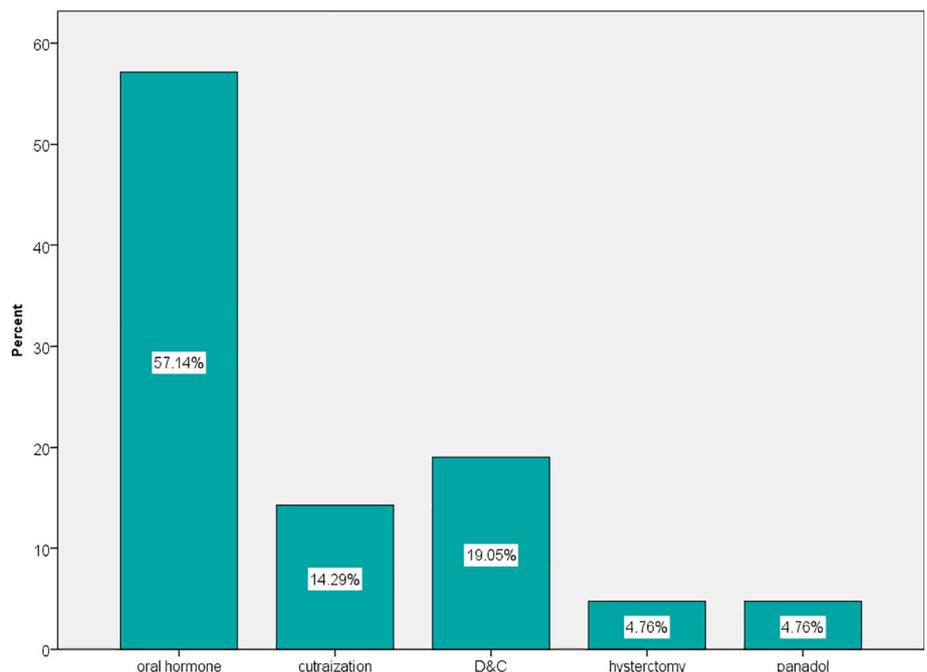


FIGURE 2 Strategies used for heavy menstrual bleeding management

patients with HMB.¹⁹ Therefore, the actual number of those diagnosed with iron deficiency anemia might be underestimated as a complete blood count, and the iron study was not part of the assessment in this study.

Despite the secure link between hemostatic defects and HMB, underlying bleeding disorders diagnosis is often delayed or unrecognized in women with HMB. This is likely explained by a lack of a multidisciplinary approach during the management of these patients.^{19,20} In our study, among those who were aware of having HMB, only 21% seek medical advice, particularly from obstetrics and gynecology clinic. In contrast, only a minority of them being evaluated by other subspecialties, including a family physician, hematology, and alternative medicine. Although several strategies have been used to manage HMB, half (45.5%) of participants were not satisfied with the offered management. Oral hormonal therapy was the most offered treatment in about half of the participants, while the rest were managed with hysterectomy, dilation, and curettage. Two studies showed that a levonorgestrel-releasing intrauterine device (IUD) reduces menstrual blood loss by 74 to 97% after 1 year of use. However, none of our study participants used hormonal IUD.⁸ Similarly, none of our study participants were on tranexamic acid despite being a safe and effective treatment.¹⁸ Hysterectomy is the definitive treatment of HMB, but since it is invasive and requires time for recovery, patients and providers may refuse it as the initial treatment of HMB.¹¹ This might explain why only one woman was managed by hysterectomy in the present study.

To our knowledge, this is the first study that discusses how common HMB and the level of awareness in our community. It also reflects the degree of satisfaction among participants about the offered management to control HMB. However, some limitations might influence the results of this study. First, the sample size might be small enough to represent the whole issue of HMB. Second, the bleeding score calculation and imaging were not part of the assessment to carefully explain HMB. Likewise, laboratory evaluations, including serum ferritin and complete blood count and the quality-of-life assessment, are needed to have an actual picture of HMB's clinical impacts.

5 | CONCLUSION

HMB is a major clinical problem though awareness about having HMB lacks regardless of age and education level. Raising awareness about the diverse and heterogenous presentation of HMB through educational programs, patient interviews, and social media, along with the implementation of a multidisciplinary approach in the management of a patient with HMB, may result in early diagnosis, early intervention, reduction of clinical consequences, and better outcomes for the patients.

ACKNOWLEDGMENT

We thank all participants for their collaboration and agreement to participate in this study.

FUNDING

No funding sources to be disclosed.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

AUTHOR CONTRIBUTIONS

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Writing - review and editing: Mortadah Alsalman

All authors have read and approved the final version of the manuscript.

Mortadah Alsalman had full access to all of the data in this study and takes complete responsibility for the integrity of the data and the accuracy of the data analysis.

TRANSPARENCY STATEMENT

Mortadah Alsalman affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; no important aspects of the study have been omitted. Any discrepancies from the study as planned have been explained.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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How to cite this article: Alsalman M, Albarak A, Busaleh F, et al. Heavy menstrual bleeding awareness among Saudi female population and clinical implications. *Health Sci Rep*. 2021;4:e244. <https://doi.org/10.1002/hsr2.244>