

DOI: <http://dx.doi.org/10.18203/2320-1770.ijrcog20150441>

Research Article

## Hysterectomy for dysfunctional uterine bleeding in the era of uterine conservation

Simar Kaur, Deeksha Pandey\*, Amal Shine

Department of Obstetrics & Gynaecology, KMC Manipal, Manipal University, Karnataka, India

**Received:** 07 June 2015

**Accepted:** 09 July 2015

**\*Correspondence:**

Dr. Deeksha Pandey,

E-mail: deekshiiobg@gmail.com

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

### ABSTRACT

**Background:** Hysterectomy is one of the modalities to manage dysfunctional uterine bleeding (DUB) where medical management fails or is contraindicated. Hysterectomy leads to guaranteed cure but does have a significant morbidity rate. In this era of popularization of various uterine conservation techniques there is a definite need to audit justification of causes which led to hysterectomy in DUB.

**Methods:** Women with a diagnosis of DUB, based on clinical and ultrasound findings, which underwent endometrial sampling/curettage were recruited for the study. All these patients were followed up. Those who underwent hysterectomy for the sake of DUB were thoroughly studied. Information regarding the histopathology report of hysterectomy specimen was collected. Finally reason and justification of hysterectomy for these women was evaluated.

**Results:** A total of 252 women were with DUB were included. In this group 76 women (30.2%) underwent hysterectomy. Noncompliance to medical management was the most common indication (in 37.6% women), which led to hysterectomy in our study group. Significant result was seen with final histology of simple endometrial hyperplasia in which 19 out of 41 (46.4 %) cases were missed on curettage. Similarly around 50% cases (21 out of 43) diagnosed as simple hyperplasia on curettage had normal endometrium on final histopathology. Contrary to this a 100% concordance was seen in complex hyperplasia (without atypia), with only two cases in our sample. More than three fourth (78%) cases had a coincidental pathology in the myometrium.

**Conclusions:** Thorough counseling for the benefits and side effects of medical management prior to starting it is imperative, as the most common indication for hysterectomy for DUB was non-compliance to medical management. If women with normal histopathology reports on curettage are not responding to medical management, further imaging and sampling is required. Women non responsive to medical management may have underlying/ co-existent myometrial pathology.

**Keywords:** Dysfunctional uterine bleeding, Hysterectomy, Curettage

### INTRODUCTION

Dysfunctional Uterine Bleeding (DUB) is defined as excessive, prolonged, or irregular menstrual bleeding in a woman of reproductive age group, without evidence of a pelvic organ disease or systemic disorder. It is one of the most common and significant gynaecological diagnosis, seen in around 10-15% of women attending a gynaecological clinic.<sup>1</sup> DUB in most of the cases can be

treated medically by reversing the endometrial abnormalities that lead to heavy and prolonged menstrual flow.<sup>2</sup> Hysterectomy is one of the modalities to manage DUB where medical management fails or is contraindicated. There is no data available stating the actual number of hysterectomies done world over, for managing DUB. However, DUB is one of the common indications for hysterectomy globally.<sup>3</sup> Hysterectomy leads to guaranteed cure but does have a significant

morbidity rate. In this era of popularisation of various uterine conservation techniques there is a definite need to audit justification of causes which led to hysterectomy in DUB.

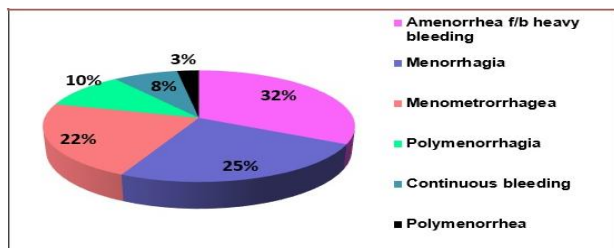
**METHODS**

This observational study was conducted in a university affiliated teaching hospital in a span of 21 months (June 2012 – March 2014). The study was approved by institutional ethical review board. Women with a diagnosis of DUB, based on clinical and ultrasound findings, which underwent endometrial sampling/curettage were recruited for the study. However after reviewing the histopathology report of the sampled endometrium, those having endometrial polyps, malignancy or true premalignant lesions were excluded from the analysis. Those where the endometrial sample was found inadequate for opinion, were also excluded. In the remaining sample now patients who underwent hysterectomy for the sake of DUB were thoroughly studied. Information regarding the histopathology report of hysterectomy specimen was collected. Finally reason and justification of hysterectomy for these women was evaluated.

**RESULTS**

A total of 327 women who were diagnosed with DUB, based on clinical and ultrasound findings were recruited for the study. Sixty cases were excluded as they were diagnosed to have endometrial polyps, malignancy or true premalignant lesions (complex hyperplasia with atypia) after curettage. Fifteen cases were excluded as the pathologists found the obtained sample inadequate for any opinion. So, finally 252 women were found to have DUB. In this group 76 women (30.2%) underwent hysterectomy.

Mean age of these women who underwent hysterectomy for DUB was 45.6 + 5.01 years. Most of them 64.9% (n=50) were in the age group of 41-50 years. Only one lady was nulliparous, while 98.7% women in our study were parous. Amenorrhoea followed by heavy bleeding was the most common symptom pattern found in 32% patients in this group. This was followed by menorrhagia (25%), meno-metrorrhagia (22%), and poly-menorrhagia (10%) (Figure 1).



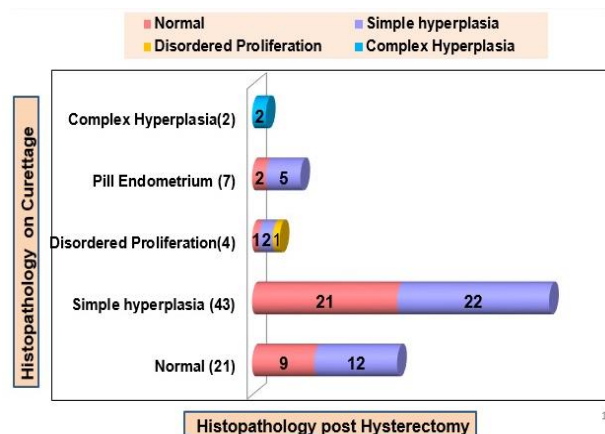
**Figure 1: Symptoms at the time of presentation (n=77).**

Noncompliance to medical management was the most common indication (in 37.6% omen), which led to hysterectomy in our study group. Other major indications were refractoriness to medical management (29.8%), and relative contraindication to hormonal management due to comorbidities (20.7%). Despite of detailed discussion regarding the availability of conservative managements 8 women (10.3%) requested for hysterectomy (Table 1).

**Table 1: Factors that led to hysterectomy in cases of DUB (n=77).**

Factors that led to hysterectomy	Number (n = 77)	Percentage (%)
Non-compliant to medical management	29	37.6
Refractory to Medical Management	23	29.8
Relative contraindication to hormonal management due to comorbidities	16	20.7
Women’s request for hysterectomy	8	10.3
Premalignant Endometrial pathology	1	1.2

We compared the histopathology report which was obtained after curettage previously with final hysterectomy specimen obtained following hysterectomy (Figure 2).



**Figure 2: Correlation of endometrial histopathology on curettage & hysterectomy (n=77).**

Significant result was seen with final histology of simple endometrial hyperplasia in which 19 out of 41 (46.4 %) cases were missed on curettage. Similarly around 50% cases (21 out of 43) diagnosed as simple hyperplasia on curettage had normal endometrium on final histopathology. Contrary to this a 100% concordance was seen in complex hyperplasia (without atypia), with only two cases in our sample (Table 2).

**Table 2: Correlation of endometrial histopathology on curettage and hysterectomy (N = 77).**

Histopathology on Curettage	Upgraded on Curettage	Downgraded on Curettage
Normal (21)	-	12 ( Simple Hyperplasia)
Simple Hyperplasia (43)	21 (Normal)	-
Disordered Proliferation (4)	-	2 (Simple Hyperplasia)

Another interesting finding in our study was the covert myometrial pathology detected on histology. More than three fourth (78%) cases had a coincidental pathology in the myometrium. Around 40% cases had evidence of adenomyosis, 18% had leiomyoma and another 20% had evidence of both in the hysterectomized specimen (Figure 3).

## DISCUSSION

Incidence of hysterectomy for DUB in our study population was 30.4%. More than three quarters being managed conservatively. Noncompliance to hormonal management was the commonest indication for hysterectomy. Medical management is the first line treatment used in cases of DUB. However the efficacy and compliance is the question with both non hormonal<sup>4</sup> as well as hormonal options.<sup>2</sup> As a treatment modality for DUB, hysterectomy guarantees amenorrhea, but the associated morbidity and complications should be understood and addressed well.<sup>5</sup> On analyzing 8 trials with 821 women, a Cochrane review concluded that hysterectomy, reduces menstrual bleeding at one year more than medical treatments but levonorgesterel-releasing intrauterine system (LNG-IUS) appears equally effective in improving quality of life.<sup>6</sup> LNG-IUS seems to be a promising option for management of DUB. A recent study from Asia-Pacific region too revealed considerable improvement in the overall treatment outcomes in women having abnormal uterine bleeding with LNG-IUS.<sup>7</sup> Thus an option of LNG-IUS should be discussed with the patient before resorting to hysterectomy in cases of DUB. One important point to be remembered is that there is no evidence available regarding the efficacy and safety of the LNG-IUS for atypical endometrial hyperplasia.<sup>8</sup> Curettage to rule out such changes in the endometrium is a must, before insertion of LNG-IUS.

Simple hyperplasia was the most common histopathology on curettage (40%); still 46% cases with final diagnosis of simple hyperplasia were missed on endometrial curettage. Concordance for simple hyperplasia on curettage and hysterectomy was around 50% while it was 100% for complex hyperplasia. Before establishing the diagnosis of DUB curettage of endometrial lining is a standard of care in most of the places across the globe.<sup>9</sup> However the discrepancy in the curettage sample and

hysterectomy specimen has posed a question mark in its reliability. Studies have found concordance of up to 70% between curettage and final hysterectomy specimen with 62% sensitivity for detecting hyperplasia.<sup>10</sup> In our study however we found it to be much lower for simple endometrial hyperplasia. A total of 43 cases of endometrial hyperplasia were detected in curettage, while only 12 (51.1%) out of these had the same findings on hysterectomy. This discordancy might be because of the fact that a through curettage might sometimes serve as a treatment for endometrial hyperplasia. However missing out on 19 (46.3%) cases of simple hyperplasia might be owing to the low sensitivity of curettage. We found a sensitivity and specificity of curettage for detecting simple endometrial hyperplasia to be only 53.6 % and 38.2% respectively.

A large number of cases (78%) with a preoperative diagnosis of DUB had undetected coexistent myometrial pathology. Around 60% women (40% adenomyosis alone and 20% with leiomyoma) had an evidence adenomyosis in the final hysterectomy specimen. In a study conducted in 204 women undergoing hysterectomy for benign gynecological conditions found a significant number of women having adenomyosis which was not diagnosed preoperatively. The authors hypothesized that endomyometrial junction deterioration during endometrial sampling may be a trigger point for developing adenomyosis.<sup>11</sup> In another study also clinical and pathological correlation were poor, when DUB was the preoperative clinical diagnosis. Based on their observation here the authors suggested hysterectomy specimens should be sent for histopathology regardless of the preoperative histopathology of the endometrium.<sup>12</sup>

In our knowledge this is the first study in English literature focusing on a very important issue in this era where uterine conservation is so much talked about. Medical management and conservative surgeries are of proven efficacy in treating DUB. However our study revealed some important aspects where the women will be relieved of her symptoms only with hysterectomy. Hysterectomy should be discussed as an option where medical management fails as the reason for failure may be underlying myometrial pathology. In these cases higher imaging modalities may be tried to rule out leiomyoma and/or adenomyosis. Simultaneously it has to be understood that the sensitivity and specificity of endometrial curettage is limited and variable among different studies. Repeat curettage may be required in cases of treatment failure. Further focused studies will be helpful in finding out the reliability of endometrial sampling by various methods (pipple, blind curettage, or hysteroscopic guided biopsy) to optimize treatment.

## CONCLUSIONS

We felt the need of thorough counselling for the benefits and side effects of medical management prior to starting it, as the most common indication for hysterectomy for

DUB was non-compliance to medical management. If women with normal histopathology reports on curettage are not responding to medical management, further imaging and sampling is required. Women non responsive to medical management may have underlying/co-existent myometrial pathology. The success of medical therapy in these cases is low and hysterectomy is usually required.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: Approved by institutional ethics committee*

## REFERENCES

1. Tripathy SN, Mahanty J. Place of aspiration cytology in dysfunctional uterine bleeding. *Journal of the Indian Medical Association.* 1990;88(9):247-8.
2. Casablanca Y. Management of dysfunctional uterine bleeding. *Obstetrics and gynecology clinics of North America.* 2008;35(2):219-34.
3. Deeksha Pandey KS, Aashish Saxena, Shripad Hebbar, Jayaram Nambiar, Rajeshwari G. Bhat. An Audit of Indications, Complications, and Justification of Hysterectomies at a Teaching Hospital in India. *International Journal of Reproductive Medicine.* 2014.
4. Lethaby A, Farquhar C, Cooke I. Antifibrinolytics for heavy menstrual bleeding. *The Cochrane database of systematic reviews.* 2000 (4):CD000249.
5. Farrell E. Dysfunctional uterine bleeding. *Australian family physician.* 2004;33(11):906-8.
6. Matjoribanks J, Lethaby A, Farquhar C. Surgery versus medical therapy for heavy menstrual bleeding. *The Cochrane database of systematic reviews.* 2006;2:CD003855.
7. Xu L, Lee BS, Asif S, Kraemer P, Inki P. Satisfaction and health-related quality of life in women with heavy menstrual bleeding; results from a non-interventional trial of the levonorgestrel-releasing intrauterine system or conventional medical therapy. *International journal of women's health.* 2014;6:547-54.
8. Luo L, Luo B, Zheng Y, Zhang H, Li J, Sidell N. Levonorgestrel-releasing intrauterine system for atypical endometrial hyperplasia. *The Cochrane database of systematic reviews.* 2013;6:CD009458.
9. Jetley S, Rana S, Jairajpuri ZS. Morphological spectrum of endometrial pathology in middle-aged women with atypical uterine bleeding: A study of 219 cases. *Journal of mid-life health.* 2013;4(4):216-20.
10. Demirkiran F, Yavuz E, Erenel H, Bese T, Arvas M, Sanioglu C. Which is the best technique for endometrial sampling? Aspiration (pipelle) versus dilatation and curettage (D&C). *Archives of gynecology and obstetrics.* 2012;286(5):1277-82.
11. Ozkan ZS, Kumbak B, Cilgin H, Simsek M, Turk BA. Coexistence of adenomyosis in women operated for benign gynecological diseases. *Gynecological endocrinology: the official journal of the International Society of Gynecological Endocrinology.* 2012;28(3):212-5.
12. Saleh SS, Fram K. Histopathology diagnosis in women who underwent a hysterectomy for a benign condition. *Archives of gynecology and obstetrics.* 2012;285(5):1339-43.

**Cite this article as:** Kaur S, Pandey D, Shine A. Hysterectomy for Dysfunctional Uterine Bleeding (DUB) in the era of uterine conservation. *Int J Reprod Contracept Obstet Gynecol* 2015;4:1133-6.