



Drug utilisation pattern and risk factor assessment on abnormal uterine bleeding in reproductive aged women in a tertiary care hospital

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ABSTRACT

To study the drug utilization pattern and risk factor assessment on abnormal uterine bleeding in reproductive-aged women in a tertiary care hospital at Salem district, Tamil Nadu, India. This retrospective study was carried out for a period of 6 months from November 2017 to April 2018 in which 150 prescriptions were selected for study by considering the inclusion and exclusion criteria. A total of 150 prescriptions were analyzed in reproductive-aged women. Patients of age group between 41-50 years were mostly diagnosed 75 (50%) of abnormal uterine bleeding. Considering the types of AUB 59 patients (39.33%) were diagnosed as adenomyosis while 49 (32.67%) of the patient has been diagnosed as leiomyoma. Anaemia 102 (68%) are the most seen co-morbid condition in our survey, along with Hypertension 28 (18.6%), Infective disorders 28 (18.6%). Our findings showed that among the drugs prescribed, that antifibrinolytics were the most often prescribed drug class for AUB, and the most prescribed drug is tranexamic acid. Perimenopause 57 (38%) is the main risk factor in abnormal uterine bleeding, along with dysfunctional uterine bleeding 49 (32.6%). From we concluded that the mostly used class of drug for abnormal uterine bleeding in our tertiary care hospital is antifibrinolytics and mostly used drug agent is tranexamic acid during the period of data collection. It is found to be that perimenopause is the main risk factor in abnormal uterine bleeding along with dysfunctional uterine bleeding.



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INTRODUCTION

Drug utilization review (DUR) is defined as an authorized, structured, ongoing review of prescribing, dispensing and use of medication. DUR encom-

passes a drug review against predetermined criteria that results in changes to drug therapy when these criteria are not met. It involves a comprehensive review of patients' prescription and medication data before, during and after dispensing to ensure appropriate medication decision making and positive patient outcomes (Madigan and Rickert, 2007)

DUR programs play a vital role in managing health care systems to perceive, interpret, and improve the prescribing, administration, and use of medicines. DURs serve to enhance the therapeutic outcomes, reduce inappropriate pharmacy expenditures, thus to reduce the overall health care costs and to improve the quality of patient's health care. (Rekha and Mubeena, 2017) (Phillips *et al.*, 1996).

DUR data additionally allows to compare and contrast the healthcare providers to evaluate a spe-

cific provider's approach to treating certain diseases against their peers. These comparisons are helpful in stimulating physicians to change their prescribing habits in an effort to improve the care. DUR information also assists in managed health care systems and PBMs (Pharmacy Benefit Management Companies) in designing educational programs to improve rational prescribing, formulary compliance, and patient compliance (Rekha and Mubeena, 2017).

Abnormal uterine bleeding (AUB) is a common problem among women in the reproductive age. AUB may be accompanied by pain and discomfort, cause significant social embarrassment, and have a substantial effect on health-related quality of life. AUB leads to loss of productivity and may result in surgical interventions, including hysterectomy. Management of such common condition in a population with wide healthcare diversity requires uniform clinical practice guidelines.

Heavy menstrual bleeding affects up to 30% of women in their reproductive period (Kotagasti, 2015). AUB is reported to occur in 9 to 14% women between menarche and menopause, significantly impacting the quality of life and imposing a financial burden. The prevalence varies in each country (Mohammed Mahmoud and Rifat, 2013; Sweet et al., 2012) (Côté, 2002). It is estimated that an annual average of 56.2 million non-pregnant women between ages 18 and 50 years having abnormal uterine bleeding (Matteson et al., 2009). Nine to fourteen percent of reproductive-aged women have blood loss that exceeds 80 mL, and abnormal uterine bleeding is a leading indication for hysterectomy, the most common non-obstetric operation in women. In India, the reported prevalence of AUB is around 17.9% and Obesity, Excessive stress, Polycystic ovarian disorder, Perimenopause, etc., are the main causes of AUB in India in both rural and urban areas (Sharma and Dogra, 2013).

The lack of awareness about the potential importance of reducing menstrual flow when women are anemic, and lack of knowledge among women and providers about treatment alternatives is of some concern. Treatment recommendations should focus on reducing the quantity of blood loss in addition to supplementing iron. So in this present study, an attempt was made to study the drug utilization pattern and risk factors associated with abnormal uterine bleeding in reproductive-aged women in a tertiary care hospital in Salem.

METHODS

This study was planned to document the drug utilization pattern received by women who were in

the age group of 13-55 years diagnosed with abnormal uterine bleeding and with other comorbid conditions during the period of November 2017-April 2018. The study was conducted in a tertiary care hospital of Salem District, Tamil Nadu. Patients who done the hysterectomy and who attained menopause before 55 years and does not have menarche after 13 years were excluded from the study. A total of 150 prescriptions of patients with abnormal uterine bleeding and other comorbidities were studied. Study procedure involves the collection of all relevant data from cases (demographic details, drugs, principal diagnosis and co-morbid conditions) obtained from gynaecology department. The data were collected according to the proforma and entered in separate excel sheets and were analyzed using SPSS.

RESULTS AND DISCUSSION

A total of 150 prescriptions were collected for the study between the age group 13-55 yrs diagnosed with abnormal uterine bleeding. In this, most of the women were belongs to the age group of 41-50 years (50%) and only (7.33%) of women belong to the age group of 13-20. Earlier studies (Shukla et al., 2017) showed that 53% of women were in the 41-50 age group compared to others, and thus, the study correlates with our study.

According to the marital status from which more number of married women 90% (n=135) are found to be affected with abnormal uterine bleeding compared to unmarried women 10% (n=15). Earlier studies (Masood et al., 2017) showed that 92% were married and thus, it correlated with our study.

It is found that about 64.67% (n=97) of women in low parity diagnosed with abnormal uterine bleeding, followed by multiparity 19.33% (n=29).

The study population was distributed on the basis of co-morbidities present the women with anemia 68% (n=102) most affected followed by hypertension 18.6% (n=28), infected disorders 18.6% and only 4.6% with depression. Earlier studies (Matteson et al., 2009) showed that 49.2% were presented with anemia, and thus, it correlated with our study.

It was found that perimenopause (38%) was the main risk factor, which causes AUB, and the second factor was DUB (32.6%). Histopathological examination revealed DUB as the single largest group (35%) consistent with some authors (Shergill et al., 2002) in the present study it was found that perimenopause was the major risk factor causing AUB.

By considering the final diagnosis based on the endometrial histopathology of various lesions out

Table 1: Distribution of study population based on types of AUB (n=150)

Sl No	Types of AUB	No of cases	% of total
1	Adenomyosis	59	39.33%
2	Leiomyoma	49	32.67%
3	Polyp	18	12%
4	Malignancy	3	2%
5	Coagulopathy	1	0.67%
6	Ovulatory dysfunction	11	7.33%
7	Endometrial	9	6%
8	Iatrogenic	0	0%
9	Not yet classified	0	0%
10	TOTAL	150	100%

Table 2: : Distribution of study population based on drug use

Sl No	Drug	No.of times prescribed (N=150)	Percentage (%)
1	Anti fibrinolytics	133	88.6%
2	Vitamin supplements	122	81.3%
3	Anti spasmodics	63	42%
4	NSAIDs	91	60.6 %
5	Ferrous sulphate	112	74.6%
6	Antibiotics	38	25.3%
7	Iv fluids	11	7.3%
8	Calcium	97	64.6%

of 150 cases most of the patients (39.33%) which has been diagnosed as adenomyosis while (32.67%) of the patient has been diagnosed leiomyoma. The present study showed discordance with an earlier study (Ghosh and Naskar, 2016) who found leiomyoma (30.84%) was the most common type of AUB (Table 1).

Depending on the drug use, it was found that antifibrinolytics (Table 2) were the most often prescribed drug class for AUB and the most commonly prescribed drug was tranexamic acid. Out of 150 patients, tranexamic acid was prescribed for 133 patients (88.6%). In the earlier study (Lukes et al., 2010), it was found that oral tranexamic acid treatment was well tolerated and significantly improved both menstrual blood loss and health-related quality of life in women with heavy menstrual bleeding (Lukes et al., 2010), which is concordance with our study.

CONCLUSIONS

Drug utilization review is useful to identify the problems and provide feedback to prescribers so as to create awareness about the rational use of the drug. From the above study, it may be concluded that

the most commonly used class of drug for abnormal uterine bleeding in our tertiary care hospital is antifibrinolytics and most commonly used drug agent for abnormal uterine bleeding is tranexamic acid. Our study also found that perimenopause is the main risk factor in abnormal uterine bleeding, along with dysfunctional uterine bleeding.

Abbreviations

AUB: Abnormal Uterine Bleeding; **DUB:** Dysfunctional Uterine Bleeding; **DUR:** Drug utilization review

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