Original Research Article

Clinico-pathological correlation of AUB patients undergoing hysterectomy in a rural tertiary care centre

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ABSTRACT

Introduction: Abnormal uterine bleeding (AUB) usually occurs in peri or postmenopausal age group. Causes of AUB according acronym (PALM-COEIN) by FIGO (2011). They are–polyp, adenomyosis, leiomyoma, malignancy and hyperplasia, coagulopathy, Ovulatory dysfunction, endometrial, iatrogenic and not yet classified.
Diagnosis was made by clinical examination, ultrasonography and confirmed by histopathology. Management can be medical, minor procedures D and C, ablative procedure and hysterectomy.

Objectives: To find out the incidence and distribution of various uterine pathology in hysterectomy specimens with related to different age groups, parity and clinical features.

Materials and Methods: A prospective study was conducted in the department of Obstetrics and Gynecology at R.L. Jalappa hospital attached to Sri Devaraj Urs Medical college, Kolar over a period of one year i.e June 2017 to May 2018. AUB cases (90) were examined. History taken about age, parity, clinical symptoms, duration and amount of blood loss. Information about gynaecological complaints, medical diseases, hormonal, operative treatment, general examination, systemic examination done and diagnosis made. Blood investigations, Pap smear and pelvic sonography done. Endometrial sampling sent for Histopathology. Hysterectomy specimens sent for Histopathology examination. Final diagnosis compared with clinical, ultrasonography and HPR.

Results: Most of the patients belonging to the age group of 41-50 years and were multiparous. Common symptoms were heavy menustral bleeding HMB 48.89%. Indications was fibroid uterus 46.67%. Endometrial biopsy was proliferative endometrium 44.44%. Histopathological study specimen showed leiomyoma (40%). Fibroid diagnostic accuracy by clinical and Sonography methods are 85.7% and 92.3%. Endometrial patterns was proliferative simple endometrial hyperplasia in perimenopausal group and complex hyperplasia in postmenopausal group.

Conclusion: Maximum patients were multiparous belonging to perimenopausal age. Common AUB symptom was HMB and diagnosis was leiomyoma which was confirmed by USG and histopathology. Hysterectomy remains definite treatment in AUB patients.

1. Introduction

Uterus, the epitome of womanhood is influenced by cyclical hormonal changes under the influence of changes in hypothalamus-pituitary- ovary axis. Menstruation is the cyclic uterine bleeding experienced by all women of reproductive age group. Menstrual disorders are a common indication for medical visits among women of reproductive age and heavy menstrual bleeding affects up to 30% of women throughout their reproductive lifetime.[1,2]

Abnormal uterine bleeding (AUB) is one of the most frequently encountered and perplexing condition in adult women.[3] AUB may be defined as any variation from the normal menstrual cycle, & includes changes in regularity & frequency of menses, in duration of flow, or in amount of blood loss.[4]

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The management of AUB by clinically, investigation and confirmed by ultrasonography but there may be discrepancy in clinical and sonological and histopathological diagnosis. Final diagnosis always correlated with histopathology study. The treatment for AUB includes both medical therapies and surgical procedures.[5] Surgical options include Hysteroscopic polypectomy, Endometrial ablation, Myomectomy, Hysterectomy. Hysterectomy is one of the most commonly performed surgeries in the world.[6]

The purpose of this study was to correlate various indications of abdominal hysterectomy with the histopathological findings of the specimens, thus determining the percentage of the pre-operative clinical diagnoses that were confirmed on histopathological examination. We also wanted to determine the frequency of unexpected disease, thus high lighting the need for subjecting each specimen for histopathological examination.

2. Materials and Methods

A prospective study was conducted in the department of Obstetrics and Gynecology at R.L. Jalappa hospital attached to Sri Devaraj Urs Medical college, Kolar over a period of one year i.e June 2017 to May 2018. All cases of AUB who underwent hysterectomy were included in the study. The exclusion criteria of this study was a) All AUB patients who didn't undergo hysterectomy, b) Patients who underwent hysterectomy for causes other than AUB and c) Hysterectomy performed for obstetrical causes.

All admitted patients with symptoms of heavy menstrual bleeding, dysmenorrhea, metrorrhagia, irregular bleeding, postmenopausal bleeding and other symptoms were examined. History included the age, parity, education, socioeconomic status, clinical symptoms, duration of symptoms and amount of blood loss, any associated comorbidities such as hypertension, diabetes and any history of previous hormonal or operative treatment. General physical examination and systemic examination was performed, then a provisional diagnosis was made. Laboratory investigations such as complete blood count, renal function test, thyroid function test, bleeding time, clotting time, Pap smear were done. Ultrasonographic examination of pelvis was done. Endometrial biopsy were preserved in 10% formalin saline and sent histopathological examination and reports were collected. Those cases in which hysterectomy was done were preserved and sent for histopathological examination. The reports were collected and final diagnosis were made. Final diagnosis were compared.

2.1. Statistical analysis

Data was entered into Microsoft excel data sheet and was analyzed using SPSS 22 version software. Categorical data was represented in the form of Frequencies and proportions.

2.2. Graphical representation of data

MS Excel was used to obtain various types of graphs such as bar diagram.

p value (Probability that the result is true) of <0.05 was considered as statistically significant after assuming all the rules of statistical tests.

3. Results and Discussion

90 AUB cases were included in the study.

Table 1 showed that 42.3 % cases belong to 5th decade 41-50 years followed by 33.3% cases belong to the 4th decade 31-40 years which are comparable to Rizvi et al[7] Their study showed that 44.5% cases belong to the 5th decade 41-50 yrs. According to study by Jairajpur et al[8] showed that 35.9 % of AUB cases in their fifth decades. Again study by Muzaffer et al[9] showed that 48.1% cases of AUB cases in their fifth decade.

Table 2 showed that maximum number of cases 53.33% were second para. Mohammad et al[10] in their study found that (65.9%) cases with a parity of 2 which is comparable to our study. Almost similar results was obtained in the studies by Lee NC et al[11] found a mean parity of 3.

Figure 1 showed that HMB was seen (48.89%) followed by dysmenorrhoea (15.56%) and irregular bleeding (12.22%) cases. Rizvi et al[7] founded that 43.7% cases presentation was HMB followed by irregular bleeding compared to our study. Nayar et al[12] found HMB 49.1% cases.

Figure 2 showed fibroid uterus found in 46.67% cases followed by adenomyosis in 23.33% cases and both adenomyosis and fibroid uterus found in 6.67% cases. Rizvi et al[7] showed fibroid uterus in 41.46% cases and adenomyosis in 46.36% cases and 19.% cases both fibroid uterus and adenomyosis. Begum et al[10] found that fibroid uterus were diagnosed clinically in 54.1% cases.

Figure 3 shows, USG common diagnosis are fibroid uterus 43.3% cases, Adenomyosis 13.33% cases, both fibroid and Adenomyosis 5.56% cases, normal uterus 23.33% cases.

Figure 4 showed that proliferative phase and hyperplastic changes together seen 44.44% cases. Secretory endometrium are found in 28.89% cases in our study comparable to study by Jairajpuri et al[8] which showed secretory endometrium was most common histopathological diagnosis followed by proliferative endometrium 28.9% and 24.9% respectively. Variation of secretory endometrium ranging from 14% to 63.5% by Bhosle et al, Takreem et al, Mirza et al, Patil et al.[11–14] Atrophic endometrium are found in 4.44% cases in our study which is comparable to study by Deligdisch et al, Chetna et al and Purendare et al which showed in 5% cases.[15–17] Endometrial hyperplasia are are found in 12.22% cases in our study as varied from study by Muzzafar etal[9] which showed endometrial

hyperplasia in 18.3% cases.

Figure 5 AUB case s undergone hysterectomy, leiomyoma found in 40% cases and Adenomyosis in 21.1 cases. Both leiomyoma and Adenomyosis 11.1% cases. Rizvi et al[7] showed that leiomyoma were found 41.46% cases. Leiomyoma was most common pathology found studies by Shergill SK et al and Abdullah LS et al

Figure 6 showed diagnostic accuracy of clinical diagnosis 85.7% and ultrasound diagnosis 92.3%. Begum et al[18] found that clinical accuracy in diagnosis were 54.1%. Diagnostic accuracy of transabdominal ultrasound in detecting Adenomyosis is 62.7%. Luigi et al[19] demonstrate sensitivity 81% and specificity 98% with transvaginalsonography in detecting adenomyosis.

Table 1: Age distribution of subjects

Age	No of cases	%
31-40	30	33.3%
41-50	38	42.3%
51-60	19	21.1%
>60	3	3.3%
Total	90	

In the study majority 42.3% were in the age group 41 to 50 years.

Table 2: Parity distributionamong subjects

Parity	No of cases	%
Nulliparous	4	4.44%
1	6	6.67%
2	48	53.33%
3	21	23.33%
≥4	11	12.22%
total	90	

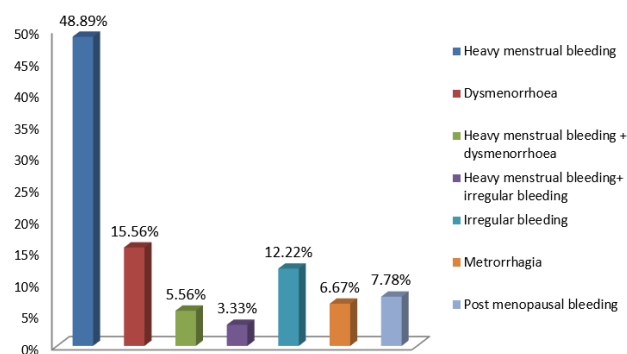In the study 4.4% were Nulliparous, majority were in para 2.

Fig. 1: Bar diagram showing clinical symptoms among subjects (In the study majority of subjects had Heavy menstrual bleeding 48.89%.)
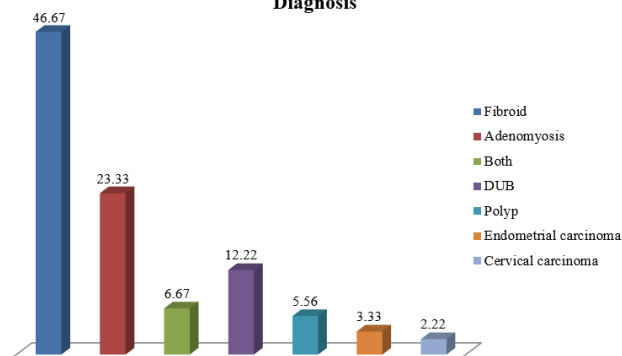

Fig. 2: Bar diagram showing diagnosis distribution among subjects (In the study clinically, 46.67% were diagnosed to have fibroid, 23.3% had Adenomyosis)
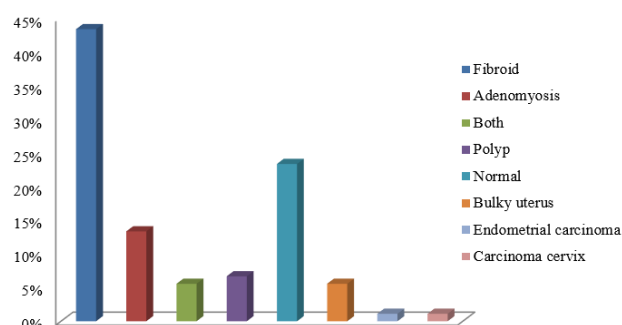

Fig. 3: Bar diagram showing USG diagnosis distribution among subjects (In the study on USG, 43.33% had fibroid, 23.33% had Normal, 13.3% had Adenomyosis)
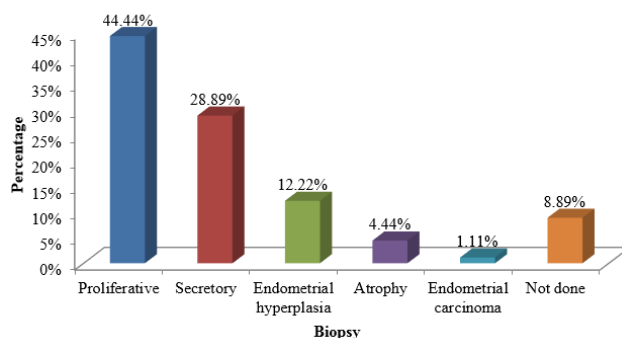

Fig. 4: Bar diagram showing endometrial biopsy distribution among subjects (In the study 44.4% had Proliferative, 28.89% had Secretory, 12.22% had Endometrial hyperplasia and 8.89% had Endometrial carcinoma).
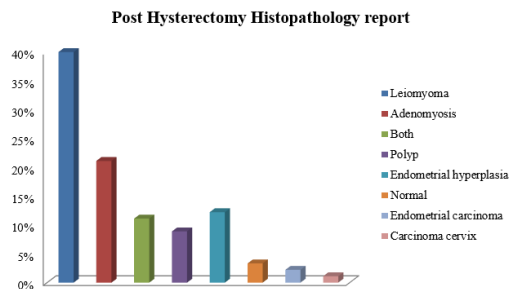
Fig. 5: Bar diagram showing post hysterectomy histopathology report (In the study 40% had Leiomyoma, 21.1% had Adenomyosis, 12.22% had Endometrial hyperplasia.)
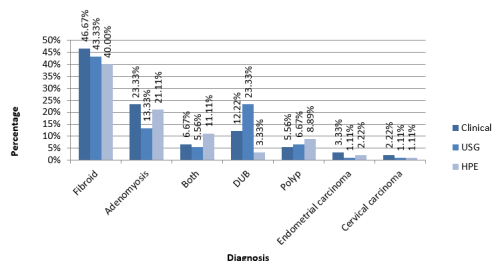

Fig. 6: Bar diagram showing correlation between clinical, USG and HPE diagnosis (In the study there was no significant correlation between Clinical and HPE diagnosis. There was significant correlation between USG and HPE.)

4. Conclusion

Hysterectomy is a very commonly performed major surgical procedure in gynaecological practice. A wide range of lesions were noted and the question still remains whether microscopic assessment and clinicopathological correlation of all the visible pathologies in hysterectomy is necessary on not. The answer is yes, as grossly identifiable benign pathology may harbor in focus of malignancy. This study confirms that benign diseases are more common than their malignant counterparts and the most common pathology identified is leiomyoma. The present study confirms a good correlation between clinical indications and histopathology especially in benign conditions.

5. Source of funding

None.

6. Conflict of interest

None.

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