Original Article

Study of clinical and pathological correlation of AUB patients undergoing hysterectomy

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Abstract

Objective: AUB usually occurs in perior 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 by clinically, investigation, ultrasonography and confirmed by histopathology. Management can be medical, minor procedures D and C, ablative procedure andhysterectomy. **Methods:** AUB cases (400) examined. History taken about age, parity, clinical symptoms, duration and amount of blood loss. Information about gynaecological complains, medical diseases, hormonal, operative treatment, general examination, systemic examination done and diagnosis made. CBC, RFT, TFT and Pap smear done.USG pelvis done. Endometrium sent for HP study. Hysterectomy specimens sent for HP examination. Final diagnosis compared with clinical and ultrasonography diagnosis. **Results:** Maximum patients were 41-50years(41.2%).Maximum AUB were multiparous around 90 % 2nd para and above. Common symptoms were HMB51.5 %.Indications was fibroid uterus 48.25 %. Endometrial biopsy was proliferativeendometrium 47.25%. Hysterectomy by abdominal route 76.75 %. Procedure was TAH and BSO. Simple endometrial hyperplasia was commonest 55.8 %. Histopathological study specimen showed leiomyoma (39.75 %). Follicular cyst ovary 40 %. Fibroid diagnostic accuracy by clinical and Sonographymethods are 78 % and 100 %. Adenomyosis diagnostic accuracy by clinical and Sonography methods are 91.2 % and 62.7%. **Conclusion:** Maximum patients were perimenopausal agegroup and multiparous. Common AUB symptom was HMB. Common diagnosis was leiomyoma. Diagnosis confirmed by USG and histopathology. Common endometrial patterns was proliferative. Common finding was simple endometrialhyperplasia in perimenopausal ages and complex hyperplasia in postmenopausal ages. Hysterectomy remains definite treatment in AUB patients.

Key Words: Heavy menstrual bleeding, Abnormal uterine bleeding, Hysterectomy, Histopathology study, Fibroid, Adenomyosis, Dysmenorrhea

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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. Normal menstruation is defined as the bleeding from secretory endometrium associated with an ovulatory cycle usually not exceeding in length of 7 days. Any bleeding not fulfilling these criteria is referred as abnormal uterine bleeding. Bleeding is said to be abnormal when pattern is irregular or abnormal duration >7 days. Increased frequency and abnormal amount >80 ml per menses also are defined as abnormal uterine bleeding. Causes of AUB according to acronym (PALM-COEIN) by FIGO (2011) are –polyp, adenomyosis, leiomyoma, malignancy and hyperplasia, coagulopathy, Ovulatory dysfunction, endometrial, iatrogenic and not yet classified**.** The most common presentations are menorrhagia, metorrhagia, dysmenorrhea, polymenorrhoea, intermenstrual bleeding, Irregular bleeding, post menstrual bleeding. Menorrhagia is replaced by Heavy Menstrual Bleeding (HMB). The management of AUB f by clinically, investigation and confirmed by ultrasonography but there may be

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discrepancy in clinical and sonologiacalandhisto pathological diagnosis. Final diagnosis always correlated with histopathology study. Management can be medical, minor procedures like DandC, ablative procedure and finally hysterectomy. Hysterectomy can be done by vaginal, abdominal, laparoscopically according to patient status, size of uterus including mobility, facilities available in institutionand finally expertise of surgeon.

MATERIALS AND METHODS

Place Of Study: Department of OandG, MKCG Medical college, Berhampur.

Study Population: 400 women with AUB undergoing hysterectomy, during the period from NOVEMBER 2014 to OCTBER 2016 will be selected for the study

Selection of Subjects

- All cases of AUB undergoing hysterectomy in dept. of obstetrics and gynaecology, MKCG medical college, Berhampur, Odisha.

Inclusion Criteria: All AUB patients undergoing hysterectomy

Exclusion Criteria: All AUB patients not undergoing hysterectomy and all causes of hysterectomy other than AUB

Study Technique: All the AUB cases are admitted to MKCG hospital with symptoms of heavy menstrual bleeding, dysmenorrhea, metrorrhagia, irregular bleeding, postmenopausal bleeding and other symptoms were examined. pregnancy related cases are excluded from study and rest cases were subjected to further study. A detailed history was taken which included the age, parity, education, socioeconomic status, clinical symptoms, duration of symptoms and amount of blood loss. Information was also collected regarding associated gynecological complain, any medical diseases, previous hormonal or operative treatment. This detail history taking was followed by detailed physical examination that included detailed general examination and systemic examination, then a provisional diagnosis was made. Then all the blood investigation like complete blood count, renal function test, thyroid function test, bleeding time, clotting time done. Pap smear also done. Ultrasonographic examination of pelvis was done. Endomtrialbiopsy 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 with clinical and ultrasonography diagnosis.

Statistical Analysis: The data collected in the study have been analyzed using appropriate statistical tools and technique. Exploratory data analysis through graphs, pie charts has been analyzed to study the pattern of distribution.

OBSERVATION AND RESULTS

Table 1: Age distribution

Age	No of case	%
<30	5	1.25
31-40	120	30
41-50	165	41.25
51-60	90	22.5
61-70	15	3.75
>70	5	1.25
Total	**400**	**100**

Table 2: Distribution of parity

Parity	Cases	Percentage
Unmarried	7	1.75
Nulliparous	13	3.25
1	20	5
2	250	62.5
3	75	18.75
4	25	6.25
5	10	2.5

Table 3: Symptoms

Clinical Symptoms	No Of Cases	Percentage%
HMB	206	51.5
Dysmenorrhoea	60	15
HMB and Dysmenorrhoea	21	5.25
HMB and Irregular Bleeding	11	2.75
Irregular Bleeding	55	13.75
Metrorrhagia	23	5.75
Postmenopausal Bleeding	24	6

Table 4: Clinical Diagnosis

Diagnosis	Cases	Percentage
Fibroid	193	48.25
Adenomyosis	103	25.75
Both	25	6.25
DUB	44	11
Polyp	17	4.25
Endo CA	11	2.75
Cervical CA	6	1.5

Table 5: USG diagnosis

Usg diagnosis	No of cases	Percentage%
Fibroid	160	40
Adenomyosis	60	15
Both	21	5.25
Polyp	23	5.75
Normal	69	17.25
Endo hyperplasia	7	1.75
Cervical ca	5	1.25
Ovarian cyst	13	3.25
Bulky uterus	15	3.75
Atrophic organs	4	1
Myohyperplasia	3	0.75
Endo and myohperplasia	11	2.75
Endometriosis	1	0.25
Endo ca	8	2

Table 6: Endometrial biopsy

Biopsy	Cases	%
Proliferative	189	47.25
Secretory	116	29.00
Endometrial hyperplasia	34	8.50
Atrophy	21	5.25
Polyp	8	2.00
Endometritis	4	1.00
Arias stellar reaction	2	0.50
Endo CA	10	2.50
Progesterone excess	1	0.25
Menstruating	2	0.50
Not done	13	3.25

Table 7: Route of operative procedure

Route	No of Cases	Percentage %
Abdominal	307	76.75
Vaginal	61	15.25
Laparoscopy	32	8

Table 8: Operative procedures

Procedure	Cases	Percentage %
TAH And BSO	212	53
TAH And BS	45	11.25
TAH	40	10
NDVH	55	13.75
VH	7	1.75
TAH And USO	9	2.25
LAVH	32	8

Table 9: HP study of Specimens

HP report	No of cases	Percentage %
Leiomyoma	159	39.75
Adenomyosis	94	23.50
Both	32	8
Polyp	29	7.25
Nad	14	3.5
Endometritis	13	3.25
Endo hyperplasia	34	8.5
Endo ca	10	2.5
Myohyperplasia	4	1
Adenomyosis and endo hyperplasia	6	1.5
Endo and myo hyperplasia	2	0.5
Cervical ca	3	0.75

Table 10: Ovarian pathology

Pathology	No of Cases	Percentage%
Follicular Cyst	12	40
Corpus Luteal Cyst	4	13.33
Serouscystadenoma	8	26.66
Mucinouscystadenoma	3	10
Dermoid Cyst	1	3.33
Chocolate Cyst	2	6.66
Total	**30**	**100**

Table 11: Myometrial pattern

Myometrial pathology	Cases	Percentage
Leiomyoma	159	39.75
Adenomyosis	94	23.5
Combined	32	8
Myohyperplasia	4	1
Normal	111	27.75

Table 12: Pattern of endometrial hyperplasia

Type of Hyperplasia	No of Cases	Percentage%
Simple Without Atypia	15	44.11
Complex Without Atypia	5	14.70
Simple With Atypia	4	11.76
Complex With Atypia	10	29.41
Total	**34**	**100**

Table 13: Co-rrelation of clinical, USG and hp study

Diagnosis	Clinical	USG	HP
Fibroid	193	152	152
Adenomyosis	103	59	94
Both	25	21	32
Polyp	17	23	29
Dub	44	69	14
Endo Ca	11	8	10
Cx Ca	6	5	3

Table 14: Complications of hysterectomy

Complication	No of Cases	Percentage %
Wound Sepsis	10	2.5
Abdo Distension	12	3
Pyrexia	23	5.75
Respiratory Infection	8	2
Uti	10	2.5
Urinary Retention	5	1.25
Malaria	6	1.5
Thrombophlebitis	2	0.5
Hemorrhage	1	0.25
Total	**77**	**19.25**

DISCUSSION

Table: 1 showed that 41.25 % cases belong to 5th decade 41-50 years followed by 30 % cases belong to the 4th decade 31-40 years which are comparable to Rizvi *et al*[1]. Their study showed that 44.5% cases belong to the 5th decade 41-50 yrs. Karmakar *et al* in their study showed PMB found that 87.2 % cases in 41-60 age group and rest were above 60 [2].According to study by Jairajpur *et al*[16] showed that 35.9 % of AUB cases in their fifth decades. Again study by Muzaffer *et al*[19] showed that 48.1% cases of AUB cases in their fifth decade. Still other researchers reported 32.1% and 33.5% of AUB in women in their fifth decade Abdullah *et al* and Saraswati *et al*[6,27] Table: 2 showed that maximum number of cases 62.5% were second para and minimum number of cases in unmarried cases 1.75%Mohammad *et al*[8] 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*[9] found a mean parity of 3. Table 3: showed that HMB was seen (51.5%) followed by dysmenorrhoea (15%) and irregular bleeding (13.75%) cases. Rizvi *et al*[1] founded that 43.7% cases presentation was HMB followed by irregular bleeding compared to our study. Nayar *et al*[11] found HMB 49.1% cases. Tyagi *et al*[10] found in 41.3% cases. Metrorrhagia is found in 5.75 % cases. Postmenopausal bleeding are seen in 6 % cases. Table 4: Showed Fibroid uterus found in 48.25 % cases followed by adenomyosis in 25.75% cases and both adenomyosis and fibroid uterus found in 6.25 % cases. Rizvi *et al*[1] showed fibroid uterus f in 41.46 % cases and adenomyosis in 46.36 % cases and 19.% cases both fibroid uterus and adenomyosis. Begum *et al*[7]found that fibroid uterus were diagnosed clinically in 54.1% cases. Polyp are found in 4.25 % cases in our study. Doraswami *et al*[30] found that 11.2% cases were due to polyp. Mirza *et al* and Cornitescu *et al* found that polyp were found in 12 % and 13 % cases respectively[17,18] whereas incidence was 1.7% as reporte by Jairajpuri *et al*[16]. Purendare *et al* found polyp in 4.8% cases[12]. Endometrial carcinoma were found in 2.75 % cases. 4.4 % were found for endometrial carcinoma by Saraswati *et al*[34]. Oncontrary much lower values 0.5% documented for endometrial carcinoma by Jairajpuri *et al* and 0.72 % by Mohammed *et al*[8,16]. Purendare *et al*[12] found that 0.9% were having endometrial carcinoma. Ovulatory dysfunction were found to be present in 11% cases as compared to 22.5 % cases found by Mohammed *et al*[8]. Table 5: Shows, common diagnosis are fibroid uterus 40% cases, Adenomyosis 15% cases, both fibroid and Adenomyosis 5.25 % cases, polyp 5.75% cases, normal uterus 17.25 % cases, endometrial hyperplasia 1.75% cases, endometrial carcinoma 2% cases, endometrial andmyometrial hyperplasia 2.75% cases. Only ovarian cyst present in 3.25% cases. Table 6: Showed that proliferative phase and hyperplastic changes together seen 56 % cases. secretory endometrium are found in 29 % cases in our study comparable to study by Jairajpuri *et al*[16] which showed secretory endometrium was most common histopathologicaldiagnosis 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*[3,4,17,5]. Atrophic endometrium are found in 5. 25% cases in our study which is comparable to study by Deligdisch *et al*, Chetna *et al*andPurendare *et al* which showed in 5 % cases[15,14,13]. Endometrial hyperplasia are are found in 8.5 % cases in our study as varied from study by Muzzafar *et al* which showed endometrial hyperplasia in 18.3% cases[19]. Table 7: Shows commonest surgical method is abdominal (76.75 %) followed by vaginal (15%) andlaparoscopically (8%) as compared to study by Mac Kanzie *et al*[24] which showed that abdominal method was preferred in 79 % cases and vaginal route in 17 % cases. Majority of cases are done by abdominal methods table- 8 53 % cases are associated with TAH and BSO. Mac Kanzie *et al*[24] showed that 50 % cases were associated with bilateral salpingo-ophorectomy comparable to our study. AUB cases undergone hysterectomy (table – 10), leiomyoma found in 39.75 % cases and Adenomyosis in 23.5 % cases. Both leiomyoma and Adenomyosis 8 % cases. Rizvi *et al*[1] 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*[26,27]. Adenomyosis was second most common pathology found. According to study by Weiss G *et al*[28] Adenomyosis was rarely diagnosed preoperatively as no specific symptoms of its own. Usually diagnosed after hysterectomy by histopathological examination Shrestha *et al*[29]. study by Deligdish *et al*, Rizvi *et al*[15,1] found that dual pathology Adenomyosis and leiomyoma were noted in 29 % cases which was higher value than our study. Endometrial hyperplasia accounted for 8.5 % cases in our study. Gredmark *et al*[21] found that varying degree of hyperplasia in around 10 % cases. Muzzafar *et al*[19] 18.3 % cases of endometrial hyperplasia reported. However lower and higher figures reported by researchers. Our study showed that 7.25 % cases are found to have polyp. Jairajpuri *et al*[16] showed incidence of polyp was 1.7 %. Mirza *et al* and Cornistescu *et al* found to be 12% and 13 % respectively[17,18]. Endometrial carcinoma are found 2.5 % cases in our study. Similar incidence 1.7 % endometrial carcinoma was reported by Sarwar *et al*[20] *et al* 2005. 4.4 % incidence of endometrial carcinoma documented by Saraswati *et al*[6]. Contrary a lower value 0.5 % found by Jairajpuri *et al*[16]. Table 10: Showed 53.33 % cases are associated with functional cyst of ovary, serous cyst adenoma 26.66 %, mucinous cyst adenoma in 10 %, chocolate cyst in 6.66 % cases and dermoid cyst in 3.33 % which is comparable to study by Perveen *et al* and Jamal *et al*[23,25]. Leiomyoma is the most common myometrial lesion in many studies Shergill SK *et al* and Abdullah LS *et al*[26, 22]. Table 11: Showed leiomyoma in 39.75 % cases. Adenomyosis was the second most common finding by Weiss G *et al*[28] which is similar to our study. Many reported that 8.02% cases showed that both leiomyoma and adenomyosis similar to our study which showed 8 % cases. Mirza *et al*[17] *et al* showed that simple endometrial hyperplasia constituted 66.6 % cases which are comparable to our study table –12. complex hyperplasia with atypia found 29.41 % cases which converted into endometrial carcinoma. Table-13showed diagnostic accuracy of clinical diagnosis 78% and ultrasound diagnosis 100 %. Begum *et al*[7] found that

clinical accuracy in diagnosis were 54.1 %. Diagnostic accuracy of transabdominal ultrasound in detecting Adenomyosis is 62.7 %. Luigi *et al*[31] demonstrate sensitivity 81% and specificity 98% with transvaginalsonography in detecting adenomyosis. Diagnostic accuracy of clinical method 58.6 % and transabdominalsonography method 79. 3 %. Endometrial carcinoma diagnostic accuracy by clinical method 90.9 % and by sonography 80 %. Cervical cancer, diagnostic accuracy of clinical diagnosis 50 % and by sonograpgy60 % compared to histopathology study. Table 14: Showed complications found in 77 cases (19.25%).Complications are pyrexia in 23 cases (5.75 %), abdominal distension in 12 cases (3%), wound dehiscence in 10 cases (2.75%), RTI in 8 cases (2%), UTI in 10 cases (2.5%). Other complications are also found like malaria, thrombophlebitis, urinary retention and secondary haemorrhage in small no of cases.

CONCLUSION

PALM –COEIN classification for AUB were formulated by FIGO. Maximum patients were in the 41-50 age group and multiparous. Common AUB symptom was HMB followed by dysmenorrhoea. Common clinical diagnosis was leiomyoma followed by adenomyosis. Among nonstructural causes of AUB, common was ovulatory dysfunction. Diagnostic were confirmed by USG and histopathology methods. Common endometrial patterns were proliferative. Common finding was simple endometrial hyperplasia in perimenopausal age groups followed by complex hyperplasia in post menopausal age groups. In spite of medical treatments and conservativesurgeries, hysterectomy remains the widely used and definite treatment modality in AUB patients.

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