

A Study on Incidence, Clinical Profile and Prescribing Pattern in Abnormal Uterine Bleeding in a Tertiary Care Teaching Hospital

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ABSTRACT

Abnormal uterine bleeding (AUB) is one of the most common conditions experiencing by every women. It is defined as bleeding from uterus that is abnormal in volume, regularity and timing. "The purpose of the study is to evaluate incidence, clinical profile and prescribing patterns of AUB in Reproductive age women". A prospective Observational study was carried out at Rajiv Gandhi Institute of medical sciences- Kadapa, over a period of 6 months. We had recruited 100 subjects of AUB and evaluated their demographics, Clinical profile and prescribing patterns. Descriptive statistical analysis was carried out for observed results. The incidence of AUB ranges about 22.02%. AUB was observed mostly in the age group of 31-40 (44%), Multiparous women was at higher risk of developing AUB 87%, the most common etiology was found to be leiomyoma (47%). The most common complaint was Heavy menstrual bleeding 70% and most commonly used diagnostic procedure was USG abdomen, thyroid profile test & biopsy. Majority of subjects developed Anemia, so blood transfused was done in 70% patients, supplements were prescribed in 85% patients, antibiotics were prescribed in 66% patients, Tranexamic acid (65%), mefenamic acid (39%), norethisterone (21%) were most commonly prescribed, HRT was prescribed in 24% and surgery was done in 32% subjects to manage AUB. By this study we conclude that as AUB is of higher incidence its management and prevention of its complications must be individualized based on etiology assessed by appropriate diagnostic procedure to promote a better Patient care.

Keywords: Abnormal uterine bleeding, Heavy menstrual bleeding, Multiparous, Tranexamic Acid, USG abdomen, Norethisterone.

INTRODUCTION

The Royal College of Obstetrics and Gynecology (RCOG) & American College of Obstetrics and Gynecology (ACOG) defined Abnormal Uterine Bleeding (AUB) as heavy menstrual loss which interferes with women's physical, social, emotional quality of life. [1] It is elaborated as the change in the frequency, duration and amount of bleeding that differs from a pattern observed during a normal menstrual cycle. [2] Menstrual loss is scientifically

defined as greater than 80 ml of blood loss for each period. [3] The prevalence of AUB is about 9%-30% in pre-menopausal women & 50% in peri-menopausal women. [2] IN UK nearly 8 lakh women are facing this condition annually with a prevalence rate of 53 per 100 women. [1,4] In India, the prevalence is around 17.9% in 2015. [1]

The International Federation of Gynecology and Obstetrics (FIGO) had designed a new classification system (PALM-COEIN) for causes of AUB. In

PALM-COEIN P-polyp, A-adenomyosis, L-leiomyoma, M- malignancy and hyperplasia, C-coagulopathy, O-ovulatory dysfunction, E- endometrial, I- iatrogenic, N- not yet classified. [2]

In Pathophysiology of AUB, Both estrogen and progesterone stimulate the prostaglandins pathway. Estrogen stimulates Tissue plasminogen activator (TPA) which is fibrinolytic and may cause bleeding, It also

activates PGE2 & PGI2 both have vasodilation property, they stimulate antiplatelet aggregation thereby causing bleeding. Progesterone stimulates PG F2 & Thromboxane A2 where they have vasoconstriction property, they stimulate platelet aggregation and thereby stops bleeding. [1] It was mentioned in briefly in below fig no.1

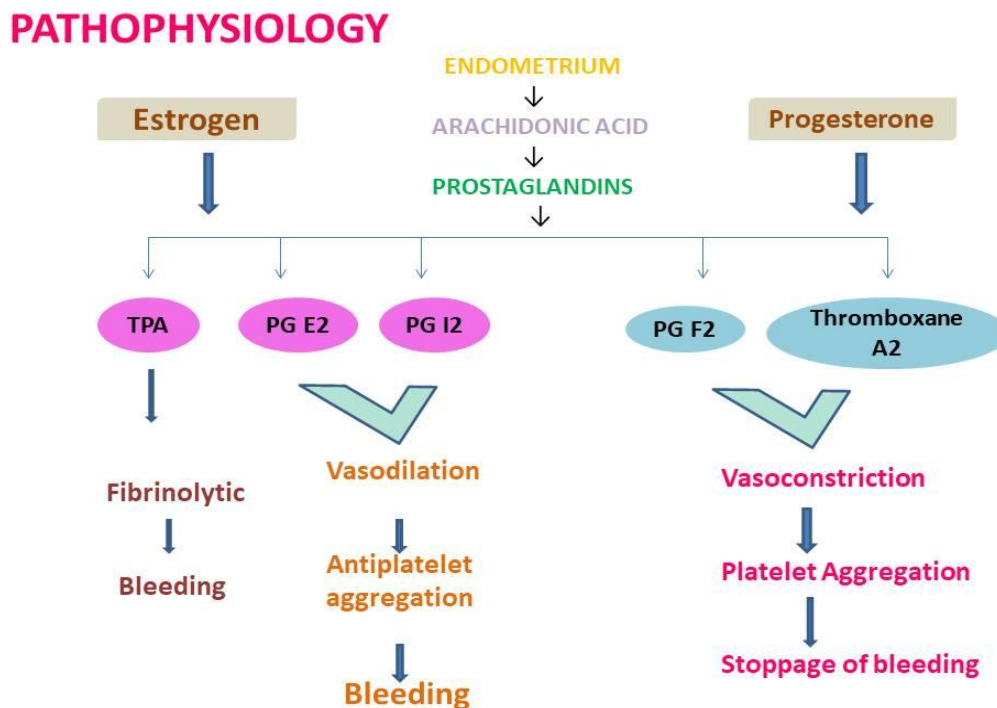


Fig.1. Pathophysiology of AUB

TYPES OF AUB:

Oligomenorrhoea: Menstrual Cycle length greater than 35 days.

Polymenorrhoea: Menstrual Cycle length less than 24 days.

Menorrhagia: Increased menstrual flow or Increased duration at regular menstrual cycles.

Menometrorrhagia: Increased menstrual flow as well as irregular bleeding between the cycles

Metrorrhagia: Irregular bleeding in between cycles. [5]

SYMPTOMS include heavy menstrual bleeding, Pelvic & abdominal pain, Abdominal cramps, and Bleeding or spotting between periods, Fatigue, SOB,

White discharge, Bleeding or spotting after sexual intercourse, Irregular periods in which cycle length varies more than 7-9 days. [6]

DIAGNOSTIC PROCEDURES include Physical examination of pelvis and vagina, Complete blood picture, Endometrial assessment, Endometrial biopsy, Ultrasound abdomen & pelvic, Saline infusion sonography, Hysteroscopy & Hysteroscopy directed biopsy, Dilation, and curettage, Hormonal evaluation tests. [1,7]

RISK FACTORS are Anticoagulant Therapy, Thrombocytopenia, Liver and Renal Diseases, Obesity, PCOS, Tamoxifen Use, Thyroid Disorders, Chronic

Anovulation Or Infertility, Nulliparity, Hypertension, Diabetes. [8]

Iron Deficiency Anemia, Uterine Cancer, Nulliparity are the complications of AUB

MANAGEMENT OF AUB

- Blood Transfusion & Iron Sucrose Therapy to manage Anemia a complication of AUB. Antifibrinolytics like Tranexamic acid-500 mg are prescribed to manage HMB.
- NSAIDs like Ibuprofen 200 to 400 mg every 4 to 6 hours, Mefenamic acid 500 mg to start with and 250 mg every 6 hours are preferred.
- Hormonal preparations like Naproxen 275 mg every 8 hours, Medroxyprogesterone 5 mg daily for 10 to 12 days each month, Depot

medroxyprogesterone acetate (DMPA) injections, Levonorgestrel intrauterine system (LNG IUS) are most commonly prescribed. [9] A combination of two or more of these agents may be required to successfully control the abnormal uterine bleeding. [9] Surgical procedures are performed when medical therapy fails some of the patients prefer surgery instead of long-term use of medications. These techniques should not be performed to women who wish to have further pregnancies. These procedures include hysterectomy, endometrial resection, and ablation. All of the surgical procedures are much more successful than oral medications. [9]

Table.1. Etiological management of AUB. [1]

ETIOLOGY	TREATMENT
Polyp	★ Hysteroscopy ★ Levonorgestrel intrauterine system.
Adenomyosis	★ Levonorgestrel intrauterine system. ★ GnRH agonists ★ If it fails Oral contraceptive pill, NSAIDs, progestogens.
Leiomyoma	★ Tranexamic acid or COCs or NSAIDs, LNG-IUS, ★ if treatment fails myomectomy depending on location.
Malignancy	★ Atypical endometrial hyperplasia — hysterectomy. ★ Hyperplasia without a typia-LNG-IUS , oral progestins
COEIN	★ LNG-IUS or tranexamic acid, NSAIDs Non-steroidal anti-inflammatory drugs followed by Combined oral contraceptives or cyclic oral progestins ★ GnRH agonists with add-back hormone therapy When steroidal and other options unsuitable: Centchroman

Pharmacists play an integral role in educating patients about the disease, medications & lifestyle modifications and also in optimizing drug therapy outcomes for patients with AUB. Effective lifestyle modification can decrease the Progression and complications of abnormal uterine bleeding. This can be achieved by providing appropriate patient counseling to AUB patients. AIM: To evaluate incidence, clinical profile and prescribing patterns of AUB in Reproductive age women. To minimize disease progression & complications of the AUB by appropriate patient counseling.

MATERIALS & METHODS

This is a prospective observational study performed at gynecology (IP & OP) Rajiv Gandhi Institute of Medical Sciences

(RIMS)-Medical College attached to RIMS Hospital, Kadapa for about 6 months [August 2018-January 2019]. This study got approval from Institutional ethical committee of RIMS with Rc.No.3308/Acad./2018. We have recruited 100 women of reproductive age. Subjects included in the study were patients between age group of 13 – 50 years, patient consulting gynecology department with or without comorbidities, patient who are willing to participate in the study. Subjects excluded from the study are patients who are not willing to participate in the study, patients with past history of AUB, patients above the age group of 50 years. Study materials include patient data collection form, clinical profile assessment form, informed consent form, patient information leaflet. We have collected Patient related

demographic details, Chief complaints, past medical & medication history, menstrual history, gestational history, occupation, marital status, life style & habits of the patients, family history, objective Evaluation Data (general examination, physical examination, systemic & local examination & lab investigations like (Hb, B.T, C.T, P.C, ESR, RBS), other investigations(USG,PAP Smear, Thyroid Profile, Other hormonal tests), Type of AUB diagnosed & Treatment provided . We have also assessed Clinical profile parameters like age of menarche, Parity, Menstrual Cycle Regularity, Type of Bleeding Pattern, Complaints, Etiology. A Patient information leaflet is provided to educate AUB patients regarding life style changes, diet to be followed.

STATISTICAL ANALYSIS

The statistical parameters like mean, standard deviation were considered to analyze the patient data. The percentage method was used to analyze the patient distribution based on various parameters by using MS Excel.

RESULTS

During the study period around 1750 women consulted gynecology O.P&IP departments, out of which 454 patients who have shown symptoms similar to AUB were screened and only 100 patients were confirmed with AUB through symptomology and USG abdomen. The data were analyzed based upon following parameters.

PATIENT DEMOGRAPHICS

1. Age
2. Stress

CLINICAL PROFILE

1. Age of Menarche
2. Regularity
3. Parity
4. Complaints
5. Bleeding pattern
6. Type of AUB
7. Diagnostic procedure
8. Type of blood group
9. Type of anemia

PRESCRIBING PATTERN

1. Conservative therapy
 - Hormonal Therapy
 - Non-Hormonal Therapy
2. Correction of Anemia
 - Blood Transfusion
 - Supplements
3. To control infections
 - Antibiotics
4. Surgical Management

INCIDENCE:

The incidence of AUB was found to be 22.02%.

DEMOGRAPHIC DETAILS OF THE PATIENTS

Age

The age group of patients diagnosed with AUB is ranging from 13-50. Among 100 patients diagnosed with AUB, 2(2%) were in the age group <20, 18 (18%) were in the age group 21-30, 44 (44%) were in the age group 31-40, 36 (36%) were in the age group 41-50. The mean age of the patients was 37.66, Standard Deviation was ± 7.099893 . The age wise distribution is given in Table 2

Table. 2. Age wise distribution of AUB Subjects

S.NO	AGE (years)	NO.OF SUBJECTS (n=100)	PERCENTAGE (%)
1	<20	2	2
2	21-30	18	18
3	31-40	44	44
4	41-50	36	36

Stress

Among 100 AUB patients 46(46%) were having stress, 54(54%) do not have any stress.

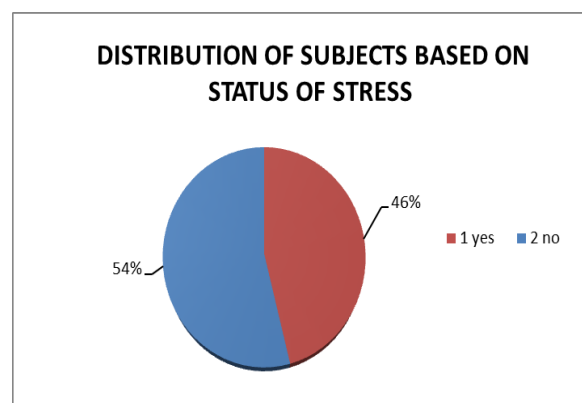


Fig.2.Distribution of subjects based on stress status

CLINICAL PROFILE

Age of Menarche

Among 100 AUB patients, 37 (37%) Patients attained menarche at the age of 13 years, 36 (36%) Patients attained menarche at the age of 12 years, 10(10%) Patients attained menarche at the age of 14 years, 8

(8%) Patient's attained menarche at the age of 15 years, 7 (7%) Patients attained menarche at the age of 11 years & 2 patients attained menarche above 15 years of age. Mean was 12.82, Standard Deviation SD was ± 1.10444648 .

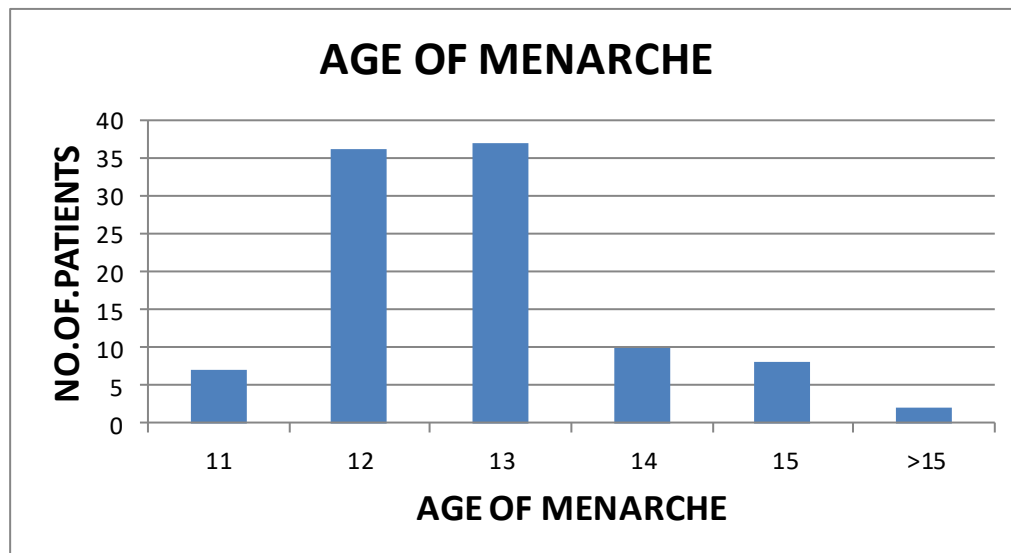


Fig.3. Age of menarche

Regularity

Among 100 AUB patients, 54(54%) patients have Regular menstrual cycle and 46(46%) have Irregular menstrual cycle.

Table. 3. Distribution of subjects based on regularity of menstrual cycle

S.NO	REGULARITY OF MENSTRUAL CYCLE	NO.OF SUBJECTS	PERCENTAGE (%)
1	Regular	54	54
2	Irregular	46	46

Parity

Out of 100 AUB patients, 4 (4%) were found to be Nulliparous, 87(87%) were found to be Multiparous, 9(9%) were Grand Multiparous

Table. 4. Distribution of subjects based on Parity

S.NO	PARITY	NO.OF SUBJECTS (n=100)	PERCENTAGE (%)
1	Nulliparous	4	4
2	Multiparous	87	87
3	Grand Multiparous	9	9

Complaints

Out of 100 patients, 70 patients experienced HMB alone & with other symptoms 65 patients experienced abdominal pain alone &/or with other symptoms, 37 patients experienced Dysmenorrhea alone &/or with other

symptoms, 4 patients experienced Mass per vagina alone &/or with other symptoms, 28 patients experienced Back ache alone &/or with other symptoms, 9 patients experienced Generalized Weakness alone &/or with other symptoms.

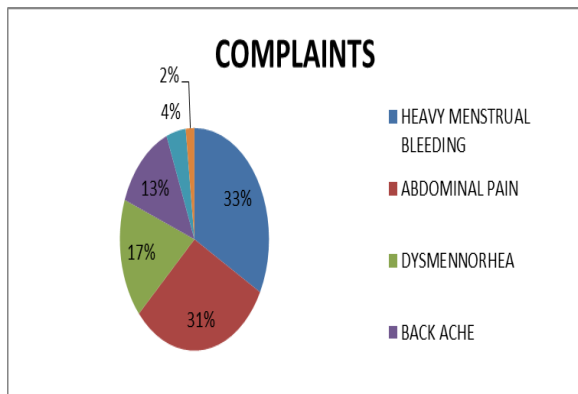


Fig.4. Complaints

Bleeding Pattern

Table. 5. Distribution of subjects based on Bleeding Pattern

S no	Bleeding Pattern	No. of Subjects (n=100)	Percentage (%)
1	Menorrhagia	61	61
2	Metrorrhagia	8	8
3	Menometrorrhagia	7	7
4	Oligomenorrhoea	4	4
5	Polymenorrhoea	20	20

Out of 100 patients, 61(61%) patients experienced Menorrhagia, 20 (20%) patients experienced Poly menorrhea, 8(8%) patients experienced Metrorrhagia, 7(7%) patients experienced Menometrorrhagia, 4 (4%) patients experienced Oligomenorrhoea.

Etiology

Out of 100 AUB patients, 41(41%) subjects had etiology of Leiomyoma, 25(25%) have Endometrial as an etiology, 11(11%) subjects had etiology of Polyp, 10(10%) had etiology of Ovulatory Disorders, 7(7%) had etiology of Adenomyosis, 2(2%) had etiology of both Leiomyoma & Polyp, 2(2%) had etiology of Not yet classified. 1(1%) had etiology of Malignancy, None had etiology of Coagulopathy, 1(1%) had etiology of Iatrogenic, Pelvic Inflammatory Disease is seen in 21 (21%).

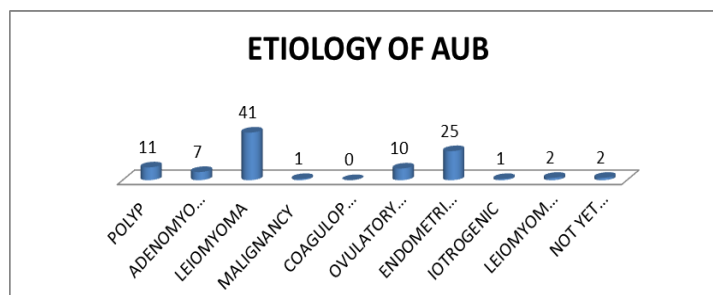


Fig.5. Etiology

Diagnostic Procedures

Table. 6. Diagnostic procedures used to confirm the disease

SNO	DIAGNOSIS PROCEDURE	NO.OF.PATIENTS (n=100)	PERCENTAGE (%)
1	USG, Thyroid	74	74
2	Biopsy	66	66
4	USG	6	6
5	Local Examination	16	16

Out of 100 AUB patients, 74(74%) patients were confirmed with AUB using USG Pelvis & Thyroid, biopsy was done in 66(66%) patient, USG pelvis alone was done in 6(6%) patients, and only Local examination was performed in remaining 16(16%) patients.

Blood Group

Out of 100 AUB patients, 27(27%) patients have A+ blood group, no one has A- blood group. 21(21%) patients have B+ blood group, 2(2%) patients have B- blood group, 12(12%) patients have AB+ blood group, 2(2%) patients have AB- blood group, 30(30%) patients have O+ blood group, 6(6%) patients have O- blood group.

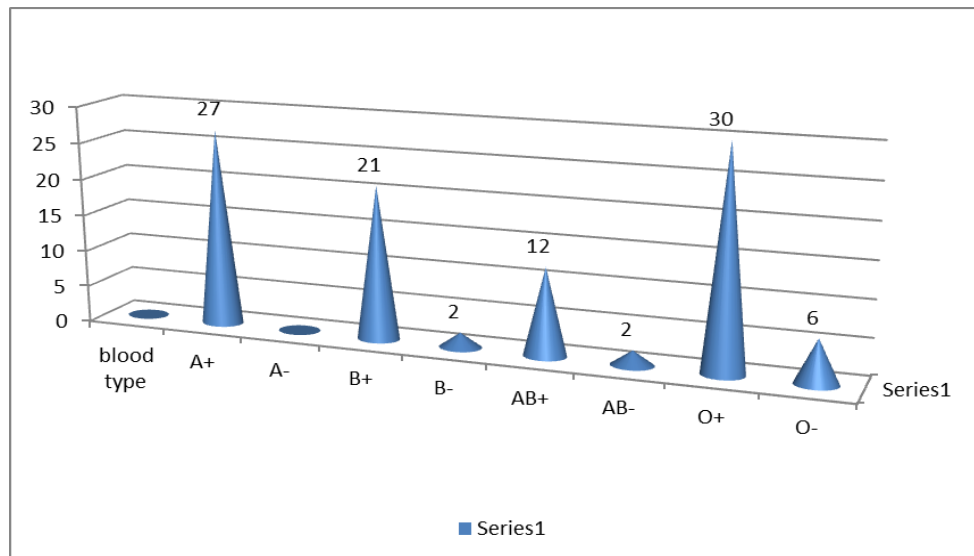


Fig.6. Blood group

Complications of AUB Anemia

Table. 7. Categorization based on type of Anemia

S.NO	TYPE OF ANEMIA Hb value	NO.OF.PATIENTS (n=100)	PERCENTAGE (%)
1	Mild(10.0-11.9)	23	23
2	Moderate (7-9.9)	47	47
3	Severe (<7)	23	23
4	None	7	7

PRESCRIBING PATTERN

Table. 8. Categorization based on Management

S.NO	MANAGEMENT	PROVIDED (No. of patients)	NOT PROVIDED (No. of patients)
<i>Correction of Anemia</i>			
1	Blood Transfusion	70	30
2	Supplements (T.IFA/B.C/VIT.C/Calcium)	85	15
<i>To control Infections</i>			
3	Antibiotics	66	34
<i>Conservative Therapy</i>			
4	Non Hormonal Therapy	88	12
5	Hormonal Therapy	24	76
<i>Surgical Management</i>			
		32	68

Blood Transfusions

Out of 100 AUB patients, 32(32%) patients were transfused with 2 units of blood, 30(30%) patients did not undergo any blood transfusions, 13(13%) patients were transfused with 3 units of blood, 12(12%) patients were transfused with 1 unit of blood, 9(9%) patients were transfused with 4 units of blood, 4(4%) patients were transfused with 5 units of blood. Mean is 1.8191, Standard Deviation SD is 1.4296591. The Correlation between Type of Anemia and No. of Blood transfusions were -0.379627.

Supplements

Table. 9. Distribution based on supplements prescribed

S.NO	SUPPLEMENTS (T.IFA/B.C/VIT.C/Calcium)	NO.OF PATIENTS (n=100)	PERCENTAGE (%)
1	Prescribed	85	85
2	Not Prescribed	15	15

Out of 100 AUB patients, supplements were prescribed in 85(85%) Patients, supplements were not prescribed in 15(15%) patients.

Antibiotics

Table. 10. Distribution based on antibiotic prescribed

S.NO	ANTIBIOTICS	NO.OF PATIENTS
1	Ceftriaxone	9
2	Metronidazole	44
3	Augmentin	3
4	Amikacin	1
5	Doxycycline	8
6	Ciprofloxacin	1
7	Taxim	19
8	Cefixime	16
9	Albendazole	9
10	Nitrofurantoin	1
11	Not Prescribed	12

Out of 100 AUB Patients, Overall 44 patients were prescribed with

Metronidazole. 19 patients were prescribed with Taxim. 16 patients were prescribed with Cefixime .9 patients were prescribed with Ceftriaxone. Further details of antibiotics prescribed in AUB patients were mentioned in above table.

Conservative Therapy

Out of 100 patients, 23 patients were prescribed with Tranexamic Acid, Mefenamic Acid. 14 patients were prescribed with Tranexamic Acid. 12 patients were prescribed with Cyclopam.8 patients were prescribed with Tranexamic Acid, Mefenamic Acid, and Norethisterone. 6 patients were prescribed with Tranexamic Acid, Norethisterone. Further information was shown in detail in figure 7.

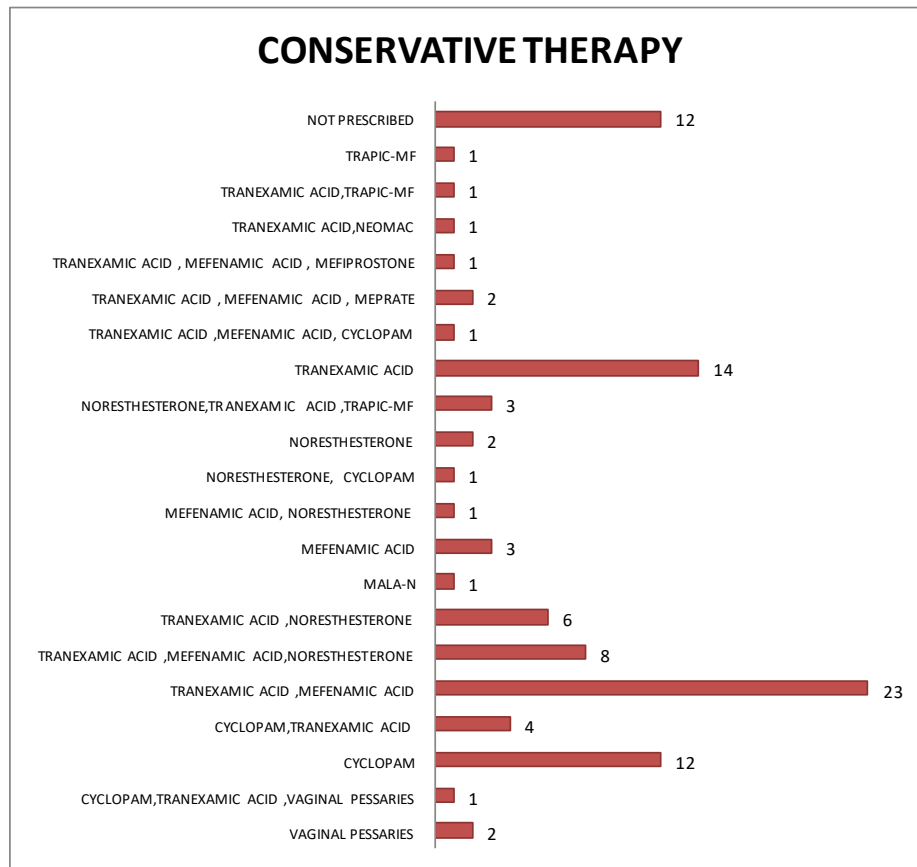


Fig.7.Conservative Therapy

Hormonal Replacement Therapy

Table. 11. Distribution based on Hormonal Replacement Therapy

S.NO	HORMONAL REPLACEMENT THERAPY	NO.OF PATIENTS (n=100)	PERCENTAGE (%)
1	Prescribed	24	24
2	Not Prescribed	76	76

Out of 100 AUB patients only 24 (24%) patients were prescribed with Hormonal Preparations (Norethisterone, MALA-N, Mifepristone, Meprate), remaining 76(76%) patients were not prescribed with Hormonal Preparations.

Surgery

Table.12. Distribution based on status of surgery

S.NO	SURGERY	NO.OF PATIENTS (n=100)	PERCENTAGE (%)
1	Total abdominal Hysterectomy	26	26
2	Poylpectomy	6	6
3	Not Done	68	68

Out of 100 AUB patients, Total abdominal hysterectomy was done in 26 (26%) patients, polypectomy was done in 6(6%) patients and no surgery was done in 68(68%) patients.

MANAGEMENT OF SPECIFIC AUB

Leiomyoma

In 41 Patients with etiology of Leiomyoma only 17(41.46%) were subjected to surgery. No surgery was done in 24(58.53%) patients. In 41 patients diagnosed with etiology of Leiomyoma, 24(58.53%) patients were prescribed with Tranexamic Acid, 17(41.46%) patients were prescribed with Mefenamic Acid, 7(17.07%) patients were prescribed with Cyclopam. 4(9.7%) patients were prescribed with norethisterone, 1(2.43%) patient was prescribed with Meprate, 1(2.43%) patient was prescribed with Mifepristone, 1(2.43%) patient was prescribed with Traptic-MF, 1(2.43%) patient was prescribed with Vaginal Pessaries

Endometrial Hyperplasia

In Patients diagnosed with etiology of Endometrial Hyperplasia, only 7(28%) were subjected to surgery. surgery was not performed in 18(72%) patients. In 25 patients of Endometrial Hyperplasia, 16(64%) patients were prescribed with Tranexamic Acid, 6(24%) patients were prescribed with Mefenamic Acid, 6(24%) patients were prescribed with norethisterone, 5(20%) patients were prescribed with Cyclopam. 2(8%) patients was prescribed with Tropic-MF 1(4%) patient was prescribed with Meprate, None of the patient was prescribed with

Mifepristone, 1(4%) patient was prescribed with Vaginal Pessaries.

Polyp

In Patients with etiology of Polyp only 4(36.36%) were subjected to surgery. In 7(63.63%) Patients no surgery was performed. In 11 patients diagnosed with etiology of Polyp, 7(63.63%) patients were prescribed with Tranexamic Acid, 4(36.36%) patients were prescribed with Mefenamic Acid, 4(36.36%) patients were prescribed with norethisterone, 1(9.09%) patient was prescribed with MALA-N, 1 patient was prescribed with Tropic-MF, 1(9.09%) patient was prescribed with Cyclopam.

Ovulatory

In 10 patients with etiology of Ovulatory, 7(70%) patients were prescribed with Tranexamic Acid, 6(60%) patients were prescribed with Mefenamic Acid, 4(40%) patients were prescribed with Cyclopam, 4(40%) patients were prescribed with norethisterone, 1(10%) patient was prescribed with Neomac, 1(10%) patient was referred to Surgery.

Adenomyosis

In 7 patients diagnosed with etiology of Adenomyosis, 6(85.71%) patients were prescribed with Tranexamic Acid, 4(57.14%) patients were prescribed with Mefenamic Acid, 3(42.85%) patients were prescribed with norethisterone, 1(14.28%) patient was prescribed with Traptic-MF, 1(14.28%) patient was prescribed with Cyclopam. None of the patient was prescribed with Meprate, Mefipristone & Vaginal Pessaries, 1 patient was referred to Surgery.

Others

Table.13. Management of Other types of AUB

S.NO	ETIOLOGY	SURGERY	PHARMACOLOGICAL THERAPY
1	Coagulopathy	0	0
2	Malignancy	0	TranexamicAcid-1, MefenamicAcid-1, T.IFA/B.C/Vit.C/Calcium 1 Unit Blood transfusion.
3	Iatrogenic	1	TranexamicAcid-1 T.IFA/B.C/Vit.C/Calcium
4	Not Yet Classified	0	Tranexamicacid-2, mefenamic acid-1, Cyclopam-1 T.IFA/B.C/Vit.C/Calcium

DISCUSSION

In our study the estimated incidence rate of Abnormal Uterine Bleeding was 22.07%. This shows the significance of assessment of Clinical Profile and Prescribing Pattern & the need of effective Management of patients with Abnormal Uterine Bleeding.

AUB is the most common presenting symptom in the women of reproductive age. Here we observed the mean age of study subjects was 37.66 (SD) and Nidhi Colecha et al ^[10] and Avanthika Guptha et al., ^[11] reported the mean age as 43.46 ±8.07 and 45.74 ±2.8 years respectively. The subjects of age group 31-40 are more subjected to AUB and this is coincides with other studies Radha Nair et al., ^[12] Avanthika Gupta et al., ^[11] S.Sudhamani et al., ^[13] (50%) and Bharti AnupRath et al., ^[14] (45.90%). This shows that incidence of AUB is increasing in this age group women due to fact that these patients are in their climacteric period i.e. nearby menopause.

In our study we observed nearly half of the patients (46 %) are with stress, which shows stress is one of the contributing factors of AUB. So it is essential to manage stress by proper stress relieving techniques.

As per our study , most of the AUB patients attained menarche at the age of 13 years (37%) and the mean age of menarche is 12.82 .Our results coincides with the study done by Radha et al ^[15] (30%).Majority of the subjects in our study shows regular menstrual cycle i.e. 54%. Studies conducted by John W Ely et al., ^[16] Radha et al ^[15] have also reported the same. Multiparous women have a slightly more average blood loss when compared to

Nulliparous, because multiparous women have greater endometrial lining & thickening changes when compared to nulliparous. In our study higher incidence was found in Multiparous patients (87%) followed by Grand multiparous & the least in Nulliparous Patients. This results coincides with the studies of Lithingo Lotha et al ^[17] (64.8%), Shoba Rani MS et al ^[18] (63.3%), AmaniHamed Gad Mohammed et al ^[19] (65%), Radha nair et al ^[12] (72%).

Menorrhagia was found to be the commonest bleeding pattern and it accounts about 61% of study population. and the results obtained correlates with the studies of Avantika Gupta et al ^[11] (53%), LithingoLotha et al ^[17] (49%), Shoba Rani MS et al ^[18] (45%), Amani Hamed Gad Mohammed et al ^[19] (47%), BhartiAmprathi et al ^[14] (32%), Sujatha jetlae et al ^[20] (46%), Nidhi kolchela et al ^[18] (32%), Sudha mani et al ^[13] (45%), Mitali Mahapatra et al ^[21] (60%).Majority of the studies had reported the same.

The Heavy Menstrual Bleeding (70%) is the commonest presenting symptom of AUB patients in our study which was supported by the results of Bharti Anuprathi et al ^[14] (90%), Radha Nair et al ^[12] (28%).

In our study combination of symptoms is as follows 17% patients with abdominal pain & backache, HMB. 7% patients had abdominal pain & dysmenorrhoea, HMB, 1% patient had abdominal pain, generalised weakness and backache.

The current study finding revealed that majority of the patients had aetiology of Leiomyoma, then Endometrial, followed by

Polyp, Ovulatory Disorders and Adenomyosis. In our study most of the subjects had aetiology of Fibroids (41%), which shows Leiomyoma is the most common etiological factor of AUB & the data reported in our study regarding this session coincides with the studies done by Lithingo Lota et al ^[17] (52.7%), Avanthika Gupta et al ^[11] (54%), Amani Hamed Gad Mohammed et al, ^[19] R. Sudha et al, ^[22] BhartiAmpRathi et al ^[14] (32%), Mitali Mahapatra et al ^[21] (37%), S. Sudha mani et al ^[13] (28%).

AUB was confirmed by various diagnostic procedures, primarily Local examination, followed by USG pelvis, and then thyroid profile, biopsy preferred. Out of 100 AUB patients, 74% patients were confirmed with AUB using USG Pelvis & Thyroid profile test and only Local examination was performed in remaining 16(16%) patients. This shows that USG Pelvis & Thyroid Profile was most commonly used diagnostic procedures for confirming the etiology of AUB.

We have screened the subjects for their blood group and tried to find the most common blood group for developing AUB, and found O+ blood group patients are more prone to AUB than other. And interestingly we have found no A- blood group females with AUB. As per our knowledge there is no study reported this data.

Anemia is one of the Complication of AUB due to heavy blood loss. In our study we witnessed the same with mean haemoglobin of all study subjects i.e. 8.29 ± 2.35 . Nearly 93% of total subjects had complication of Anemia of which 47% subjects were diagnosed with moderate Anemia, followed by mild 23% & severe Anemia 23%. 70% of severe & moderate study subjects were transfused with Blood to manage the complication. The mean of no. of blood transfusions was found to be 1.81 ± 1.4296591 . The correlation between haemoglobin value and No. of. Blood transfusions were -0.379627 .

Around 85 % of subjects have received supplementations like IFA, vitamin

B complex, vitamin C, Vitamin, A&D, calcium supplements along with other therapies like antibiotic, Hormonal and symptomatic therapies. This shows supplements were commonly prescribed in AUB patients in order to treat/ prevent complications like Anemia and to nourish the patients.

Antibiotics are the most commonly prescribed medications in this study for prophylaxis and / to treat hospital acquired infections & surgical site infections & to treat pelvic Inflammatory Disease. In our study most commonly prescribed antibiotics are Cephalosporins (44%) and Nitroimidazoles (44%). As per our knowledge we did not find any studies regarding use of antibiotics in Abnormal Uterine bleeding.

Tranexamic acid was most commonly prescribed drug in all AUB patients with different etiologies as this is more effective in managing AUB as per clinicians view & based on patient outcomes, This was supported by studies carried out by Shobha Rani MS et al ^[18] (87.5%). Tranexamic acid, being a coagulant in nature it controls the excess blood loss within a short period of time with less side effects, also supported by the study carried out by Avanthika Gupta et al. ^[11]

Next to Tranexamic acid, NSAID were most commonly prescribed, among NSAIDS frequently used medication was Mefenamic acid (39%) which correlates with the study done by Bhuvanewari.S et al ^[23] (61%). Mefenamic acid was most commonly prescribed to treat pain and it also has additional benefit such as it can control bleeding by its action of prostaglandins.

Hormonal preparations have greater influence in correcting the irregular menstrual cycle, by maintaining normal estrogen & progesterone levels. Among hormonal Replacement medications commonly prescribed Hormonal preparation was Norethisterone (87%), which is an effective HRT as per physicians view & our

study results are supported by study done by Sobha Rani MS et al ^[18] (56%).

Out of 100 prescriptions, Most of the prescriptions contains combinational therapy i.e. antibiotics, Supplements, Hormonal Therapy, Tranexamic acid & Mefenamic acid.

Surgery was performed in only 32 % patients ,which shows surgery was less preferred ,as complete removal of uterus leads to stoppage of Menstrual cycle which may further leads to many cardiovascular, metabolic & Bone related problems.

Among surgeries, total abdominal hysterectomy (26%) was most commonly performed and our results were supported with the study done by Bhuvaneshwari S et al ^[23] (7%). Mostly surgery was performed in patients with etiology of Leiomyoma (41.46%). It was mostly done on patients above 40 years of age & in patients who have no improvement with pharmacological therapy on patient willingness.

CONCLUSION

AUB is a common gynecological symptom in the women of reproductive age. In this study, an attempt has been made to find the incidence, clinical profile & prescribing pattern in AUB and the result of our study concludes that the incidents ranges about 22.02% and more common in the age group of 31-40 years, most of the AUB study subjects attained menarche at the age of 13 years leiomyoma was most common cause for AUB in our study subjects, we conclude that Multiparous women with leiomyoma & stress are at the risk of developing AUB. Menorrhagia was found to be commonest clinical presentation and it was proved that USG & thyroid was the best diagnostic procedure for diagnosing AUB. No A-ve blood group women were found with AUB during our study period. Most of the study subjects had the complication of anemia.

We conclude that antibiotic treatment was given in majority of patients to treat hospital acquired infections, surgical site infection and pelvic inflammatory

disease. Tranexamic acid and mefenamic acid was found to be most commonly chosen medication to control abnormal menstrual blood loss and to control pain respectively among hormonal preparations Norethisterone was commonly prescribed. Hysterectomy was less commonly preferred in managing AUB when compared to pharmacological therapy, because it is the responsibility of health care professionals to encourage implementation of alternative pharmacological therapy to ensure that women receive maximum benefits with least morbidity. Treatment must remain individualized and encompass the impact of pressure symptoms, desire for retention of fertility and contraceptive needs, as well as address the management of AUB based on etiology assessed by appropriate diagnostic procedure and complication associated with AUB in order to achieve a better patient care.

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