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Co relation between old terminology of abnormal uterine bleeding, age, parity and PALM COEIN, with specific management.

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ABSTRACT: Introduction: Abnormal uterine bleeding (AUB) is the most common symptom of gynecological conditions, which is defined as any type of bleeding in which the duration, frequency, or amount is excessive for an individual patient . A large number of terms are used to define the bleeding patterns of AUB, like menorrhagia, metrorrhagia, hypermenorrhea, menometrorrhagia, polymenorrhea etc. The development of PALM COEIN classification system for AUB has been remarkable for a long time, because the classical terminology defining AUB contains terms that are not related to a particular pathological process .The objective of the study is to co relate the age, parity and bleeding patterns in each type of AUB group, such that the most important factor for the management of the patient is evident. **Materials and method:** This study was conducted from September 2020 to January 2021, as a retrospective observational study in the department of Obstetrics and Gynaecology at LallaDed Hospital, Srinagar. All the relevant data regarding age, parity, bleeding patterns, diagnosis, treatment and type of AUB was collected from hospital records and analysed. **Results:** AUB P required polypectomy irrespective of age, parity or bleeding pattern. The treatment for AUB A and L, however differed on the basis of bleeding pattern and age and parity. AUB O was treated according to specific etiology. **Conclusion:** The PALM COIEN classification is important for knowing the cause of the AUB and classifying it. However in terms of deciding the specific treatment modality, it is insufficient and the old terminological classification describing the bleeding pattern plays a pivotal role in deciding the specific treatment among the various types of treatment modalities for the specific AUB. Thus both the classifications need to be clubbed to ensure proper patient management.

Keywords: Abnormal uterine bleeding,Adenomyosis, Hormonal medication, PALM COEIN, Leiomyoma.

I. INTRODUCTION

Abnormal uterine bleeding (AUB) is the most common symptom of gynecological conditions, which is defined as any type of bleeding in which the duration, frequency, or amount is excessive for an individual patient [1]A large number of terms are used to define the bleeding patterns of AUB, like menorrhagia, metrorrhagia, hypermenorrhea, menometrorrhagia, polymenorrhea etc. However, there has been an update to standardize descriptive terms, and menorrhagia, metrorrhagia, and oligomenorrhea have been replaced with the terminology of heavy menstrual bleeding (HMB), intermenstrual bleeding, and unscheduled bleeding or breakthrough bleeding with the use of hormone medication [2]. The development of PALM COEIN classification system for AUB has been remarkable for a long time, because the classical terminology defining AUB contains terms that are not related to a particular pathological process [3]. However when it comes to treatment of patients the choice of treatment depends not only on the etiological factor of AUB, but also the bleeding patterns which are described accurately by old terminology and also factors like age and parity.The objective of the study is to co relate the age, parity and bleeding patterns in each type of AUB group, such that the most important factor for the management of the patient is evident.

II. MATERIALS AND METHOD

This study was conducted from September 2020 to January 2021, as a retrospective observational study in the department of Obstetrics and Gynaecology at LallaDed Hospital, Srinagar. All the relevant data regarding age, parity, bleeding patterns, diagnosis, treatment and type of AUB was collected from hospital records. The relevant data was collected and analysed in Microsoft excel sheet .

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Inclusion criteria:
1. Age15-55 years
2. Abnormal uterine bleeding with complete hospital records

Exclusion criteria:
1. Pregnancy
2. Vaginal bleeding caused due to cervical or vaginal cause
3. Chronic liver disease
4. Chronic renal disease
5. Non endometrial malignancy
6. Post menopausal women

III. RESULTS

Table 1: AUB P

AUB P	No. Of patients (5)	Age group	Bleeding pattern	parity	Treatment
	1	31- 40	Polymenorrhea	Multi	Tranexeminc acid + polypectomy
	1	31 - 40	polymenorrhagia	Grand multi	Tranexemic acid + polypectomy
	1	>/=41	menometrohagia	Multi	polypectomy
	1	21 –29	menometrohagia	primi	polypectomy
	1	>/=41	menorrhgia	Multi	polypectomy

All patients inevitably required polypectomy irrespective of the age, parity, or bleeding pattern only those required medical management with tranexemic acid, in addition to polypectomy, who were currently bleeding while awaiting surgery. Therefore in case of AUB P , the classification is sufficient for definitive treatment.

Table 2: AUB A

AUB A	No. Of patients (9)	Age group	Bleeding pattern	parity	Treatment
Including AUB A + P (1)	2	>/=41	menorrhagia	multi	TAH
	1	31 - 40	menometrorrhagia	Grand multi	LNG IUS
	1	31 -40	polymenorrhagia	Grant multi	LNG IUS
	1	20 -30	polymennorhea	primi	Tranexemic acid + norethisterone
	1	20 -30	Polymenorrhagia	multi	Tranexemic acid + norethisterone
	1	31 - 40	menorrhagia	multi	Tranexemic acid
	1	>/=41	menorrhagia	multi	Tranexemic acid + norethisterone
	1	>/=41	menometrohaggia	multi	norethisterone

Age and parity remained an important factor for decision among treatment options in AUB A. While women in perimenopausal age group were acceptable of TAH; middle aged women in age group 31-40 yrs, opted for LNG IUS, as preservation of uterus is an important factor among these women even though family may be complete. However , LNG IUS was not suitable in women whose family was incomplete and they opted for medical management fully aware of the fact that it was temporary and not a definitive management.

Bleeding pattern was an important factor in medical management in order to choose whether patient needed hormonal or non hormonal management.

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Table 3: AUB L

AUB L	12	Age group	Bleeding pattern	parity	Treatment
	1	</=20	menorrhagia	primi	Tranexemic acid
	2	>/=41	menorrhagia	multi	Tranexemic acid
	1	21 - 30	menorrhagia	primi	Tranexemic acid
	1	31 -40	Menorrhagia	Multi	Tranexemic acid
	1	>/=41	menorrhagia	multi	Tranexemic acid + Mifepristone
	1	>/=41	polymenorrhagia	primi	TAH
	1	31 - 40	polymenorrhagia	multi	TAH
	1	31 -40	Menorrhagia + dysmenorrhea	multi	LNG IUS
	1	31 - 40	Menorrhagia + dysmenorrhea	multi	Tranexemic acid + medroxy progesterone
	1	20 – 30	polymenorrhea	multi	Tranexemic acid + norethisterone
	1	31 - 40	menorrhagia	multi	Tranexemic acid + northesterone
AUB L+A	1	>/=41	polymenorrhea	Grand multi	Tranexemic acid + norethisterone
AUB L+ M	1	>/=41	polymenorrhagia	Multi	TAH

Treatment modality in AUB L depends on age , parity , bleeding pattern. While TAH was a treatment option in perimenopausal women, however in case of disturbing bleeding pattern of polymenorrhagia with a distorted endometrial cavity, women in 31 – 40 yrs age group also opted for the same, as the insertion of LNG IUS was not an option. Bleeding pattern was the main factor in women who opted for medical management in determining whether women required hormonal treatment or simply tranexemic acid.

Though medical management was mainly opted in women whom family was incomplete, in one case, woman with AUB L+A opted for the same as she had responded to the same and was also councelled regarding LNG IUS since she belonged to perimenopausal age group and her family was also complete. The cost factor and fear of insertion of an IUS are also important factors that affect patient choice for the method.

Table 4: AUB M

AUB M	No of patients (7)	Age	Bleeding pattern	Parity	Treatment
	1	>/=41	menometrohagia	multi	TAH
	1	>/=41	polymenorrhagia	multi	TAH
	1	31 - 40	polymenorrhea	Grand multi	TAH
	1	>/=41	polymenorrhagia	multi	LNG IUS
	1	>/=41	menorrhagia	multi	LNG IUS
	1	31 - 40	polymenorrhagia	Grand multi	Tranexemic acid + norethisterone
	1	31 - 40	menorrhagia	Multi	Norethisterone

The endometrial biopsy in all cases of AUB M was of benign pathology. 42.85 % of patients opted for surgical management considering the perimenopausal age group and family was complete. Other 28.57% opted for LNG IUS as an alternative to surgery. Oral hormonal treatment was reserved as initial treatment for middle aged women.

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Table 5: AUB I

AUB I	No of patients (7)	Age	Bleeding pattern	Parity	Treatment
	1	20 - 30	menometrohaggia	Primi	Combined oral pill
	1	20 - 30	menorrhagia	Multi	Combined oral pill
	1	20 - 30	menorrhagia	Primi	Tranexemic acid
	1	20 - 30	polymenorrhea	Multi	Tranexemic acid
	1	20 - 30	polymenorrhagia	Multi	Norethisterone followed by combined oral pills
	1	20 - 30	polymenorrhagia	Multi	Tranexemic acid + combined oral pills
	1	31 - 40	menorrhagia	Multi	Tranexemic acid + norethisterone

All the patients were suffereing from AUB I due to side effects of contraceptives, either DMPA, or IUCD, or erratic intake of combined oral pills, or emergency pill. They were started on combined oral pills in order to regularize their cycles and most of them developed irregular menstrual pattern .

Table 6: AUB E

AUB E	No of patients (8)	Age	Bleeding pattern	Parity	Treatment
	1	21 – 30	polymenorrhagia	Primi	norethisterone
	1	21 - 30	Polymenorrhea	Multi	Norethisterone
	1	31 - 40	menometrohagia	Multi	LNG IUS
	1	31 - 40	Menorrhagia	Multi	Tranexemic acid
	1	31 - 40	polymenorrhagia	Multi	norethisterone
	1	31 - 40	menorrhagia	Multi	Tranexemic acid + norethisterone f/b combined oral contraceptive pills
	1	21 - 30	polymenorrhea	Multi	Combined oral pills
	1	21 - 30	polymenorrhagia	Multi	Combined oral pills

In AUB E , patients were mainly started with norethisterone due to their irregular and heavy bleeding patterns, irrespective of age group and parity. However due consideration was given to the need of contraception and those willing were started on LNG IUS and combined oral pills .

Table 7: AUB O

AUB O	No of patients (49)	Age	Bleeding pattern	Parity	Treatment
	2	</=20	Oligo + Hypomenorrhea	Nulli parous	Combined oral pill +myoinositol+Acetylcystein
	1	31-40	Oligomenorrhea	Nulli parous	Myoinositol+Acetylcystein + /- Metformin
	1	21-30	Menorrhagia	Multi	Norethisterone + thyroxin
	1	</=20	Oligo +	Nulli parous	Cabergolin +

			Hypomenorrhea		Myoinositol+Acetylcystein + /- Metformin
	1	</=20	Oligomenorrhea	Nulli parous	Withdrawal with Medroxy progesterone acetate + thyroxin
	1	21- 30	Oligomenorrhea	Nulli parous	Myoinositol+Acetylcystein + /- Metformin+ thyroxin
	1	21-30	Oligomenorrhea	Nulli parous	Combined oral pill +myoinositol+Acetylcystein
	1	</=20	Hypomenorrhea	Nulli parous	Myoinositol+Acetylcystein + /- Metformin
	1	21 -30	Oligomenorrhea	Nulli parous	Myoinositol+Acetylcystein + /- Metformin
	1	21-30	Hypomenorrhea	primiparous	Combined oral pill +myoinositol+Acetylcystein
	1	21-30	Hypomenorrhea	Nulli parous	Cabergolin + thyroxin
	1	31-40	Oligomenorrhea	Multi	Combined oral pill
	1	</=20	Oligomenorrhea	Nulli parous	Combined oral pill
	1	31-40	Oligomenorrhea	multi	Cabergolin
	1	21-30	Oligomenorrhea	Nulli parous	Combined oral pill
	1	</=20	Oligo + Hypomenorrhea	Nulli parous	Cabergolin
	1	31-40	Oligomenorrhea	Nulli parous	Cabergolin
	1	21-30	Oligomenorrhea	Nulli parous	Combined oral pill +myoinositol+Acetylcystein
	1	</=20	Oligomenorrhea	Nulli parous	Myoinositol+Acetylcystein + /- Metformin
	1	</=20	Oligomenorrhea	Nulli parous	Combined oral pill +myoinositol+Acetylcystein + thyroxin
	4	</=20	Oligomenorrhea	Nulli parous	Combined oral pill +myoinositol+Acetylcystein
	1	21-30	Oligomenorrhea	Nulli parous	Combined oral pill +myoinositol+Acetylcystein
	1	31-40	Polymenorrhea	Multi	Combined oral pill
	1	31-40	Polymenorrhagia	Multi	Thyroxin
	1	21-30	Polymenorrhagia	Multi	Tranexemic acid + norethisterone
	1	21-30	Polymenorrhagia	prmiparous	Combined oral pill
	1	>/=41	Polymenorrhagia	Multi	LNG IUS
	1	21-30	Menorrhagia	Multi	Tranexemic acid + norethisterone + thyroxin
	1	31-40	Menorrhagia	Multi	Norethisterone
	1	21–30	Menorrhagia	Nulli parous	Combined oral pill + thyroxin
	1	31-40	Menorrhagia	Multi	Tranexemic acid + norethisterone
	1	21-30	Menorrhagia	Nulli parous	Thyroxin
	1	>41	Menorrhagia	Grand multi	Tranexemic acid
	1	31-40	Menorrhagia	Multi	Tranexemic acid + thyroxin
	1	31-40	Polymenorrhagia	Grand multi	Medroxy progesterone acetate f/b Combined oral pills
	1	31-40	Menorrhagia	Multi	thyroxin
	1	>/=41	Menorrhagia	Grand multi	Tranexemic acid +

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					norethisterone
	1	</=20	Menorrhagia	Nulli parous	Tranexemic acid
	1	31-40	Polymenorrhagia	Multi	Tranexemic acid
	1	>/=41	Polymenorrhagia	Multi	LNG IUS
	1	31-40	Polymenorrhagia	Multi	Tranexemic acid + norethisterone
	1	31-40	Polymenorrhagia	Multi	Norethisterone + thyroxin
	1	21–30	Polymenorrhea	primiparous	Tranexemic acid + norethisterone + thyroxin
	1	</=20	menometrohagia	Nulli parous	Laprotomy
	1	31 - 40	Metrohagia	Multi	Tranexemic acid + norethisterone

The group belong to AUB O was the most heterogenous and the broad classification of AUB O was insufficient for treatment. The bleeding pattern was the first cue to even diagnosis and most important factor for treatment. Since AUB O comprises a heterogenous group, the treatment was based on the pathology of each specific case, including PCOS, hyperprolactinemia, hypothyroidism, endometriosis , ovarian tumors etc.

As we can see in the table, for the treatment of the patient it was not sufficient to only catergorize the AUB according to PALM COEIN, but to take the bleeding pattern into consideration. The treatment modality also depends on the age and parity of the patient, however the management greatly differed even in the same age group or parity depending on the bleeding pattern observed.

IV. DISCUSSION

Abnormal uterine bleeding is the most common complaint seen in female patients attending gynaecological outpatient department.However , there are varied etiologies and PALM COEIN classification helps in differentiating according to cause.

Incase, of AUB P, all pateints were surgically managed irrespective of age, parity,clinical presentation, however due to varied clinical presentation, some were prescribed tranexemic acid while awaiting surgery. According to Nathani F et al.[4], hysteroscopicpolypectomy is recommended for AUB P.

In case of AUB A, despite single etiology, the management differed greatly depending on bleeding pattern and parity. While patients whose family was complete were treated with LNG IUS or TAH, those with irregular menstrual cycles were treated with oral norethisterone. Middle aged women in age group 31-40 yrs, opted for LNG IUS, as preservation of uterus is an important factor among these women even though family may be complete.E.Gupta[5] et al. conducted a study in which LNG IUS was found to be associated with significant improvement in heavy menstrual bleeding and dysmenorrhea. The mean age group that opted for it was 31-40 yrs, as in our study.

Treatment modality in AUB L depends on age , parity , bleeding pattern. While TAH was a treatment option in perimenopausal women, however in case of disturbing bleeding pattern of polymenorrhagia with a distorted endometrial cavity, women in 31 – 40 yrs age group also opted for the same, as the insertion of LNG IUS was not an option. Bleeding pattern was the main factor in women who opted for medical management in determining whether women required hormonal treatment or simply tranexemic acid. medical management was mainly opted in women whom family was incomplete. TAH was done in 25% of patients, while 41% were given non hormonal treatment and 25% were given hormonal treatment in addition to tranexemic acid. this difference in treatment was based on age, parity and bleeding patterns. In study conducted by T.L.Suseela[6], 41.46% were subjected to surgery among AUB L,conservative management was done in 58.53%, whereas tranexemic acid was prescribed in all, along with various hormonal and non hormonal medication.

The endometrial biopsy in all cases of AUB M was of benign pathology and no case of endometrial carcinoma was found. In AUB M, 42.85% underwent TAH, while 28.57% had LNG IUS insertion and 28.57% were prescribed oral hormonal medication as they belonged to middle age group. In study by T.L.Susheela[6] et al., In Patients diagnosed with etiology of Endometrial Hyperplasia, only 28% were subjected to surgery and 24% patients were prescribed with norethisterone.

All the patients were suffereing from AUB I due to side effects of contraceptives, either DMPA, or IUCD, or erratic intake of combined oral pills, or emergency pill. They were started on

combined oral pills in order to regularize their cycles as most of them developed irregular bleeding pattern. The treatment in case of AUB I, depends on the bleeding pattern disturbances and is treated according to the specific cause. In a study conducted by Schrager S. et al[7]. on abnormal uterine bleeding due to hormonal contraceptives, found that it was the main cause of discontinuation and had to be treated according to the type of contraception used.

In AUB E , patients were mainly started with norethisterone due to their irregular and heavy bleeding patterns, irrespective of age group and parity. However due consideration was given to the need of contraception and those willing were started on LNG IUS or combined oral pills . According to M. Khroufet al[8]. medical management is the first line treatment which includes both hormonal as well as non hormonal medication.

The group belong to AUB O was the most heterogenous and the broad classification of AUB O was insufficient for treatment. The bleeding pattern was the first cue to even diagnosis and most important factor for treatment. Since AUB O comprises a heterogenous group, the treatment was based on the pathology of each specific case, including PCOS, hyperprolactinemia, hypothyroidism, endometriosis , ovarian tumors etc.Katrina jones et al.[9] stated that the determination of treatment of AUB O, was through the etiology of the ovulatory disorder and patients therapeutic goals.

V. CONCLUSION

The PALM COIEN classification is important for knowing the cause of the AUB and classifying it. However in terms of deciding the specific treatment modality, it is insufficient and the old terminological classification describing the bleeding pattern plays a pivotal role in deciding the specific treatment among the various types treatment modalities for the specific AUB. Thus both the classifications need to be clubbed to ensure proper patient management.

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