



## AGE DISTRIBUTION PATTERN IN AUB ACCORDING TO PALM COEIN CLASSIFICATION

**Dr. Saniyah Khan Galzie**

Medical Officer, Health And Medical Education, J&K.

**Dr. Rehana Rashid\***

Senior Resident, Department of obstetrics and gynaecology, GMC Srinagar, J&K.  
\*Corresponding Author

**ABSTRACT** **Introduction:** AUB ( abnormal uterine bleeding)comprises common conditions that effect 14–25% of women of reproductive age. FIGO devised a universally acceptable system of nomenclature and classification, namely PALM–COEIN classification of AUB in 2011. Which stands for Polyp, Adenomyosis, Leiomyoma, Malignancy (and hyperplasia) , Coagulopathy, Ovulatory disorders, Endometrial, Iatrogenic and Not otherwise classified. This was in order to standardise definitions, nomenclature and the underlying categories of aetiology. **Materials And Method:** A retrospective observational study was done in the department of Gynaecology and Obstetrics at Lalla Ded Hospital, Srinagar, Kashmir from September 2020 to December 2021. **Results:** In our study, maximum patients(34%) were in age group of 31-40 years followed by 21-30 years(30%) and <20 years(17%). AUB O was the most common cause of AUB (55%), followed by AUB L (12%). In AUB-A group maximum patients were in age group of more or equal to 41 years. In AUB-L maximum patients were in age group of 31 to 40 years. In AUB-O, AUB-I & AUB-E maximum patients were in age group of 21 to 30 years. **Conclusion:** AUB O was the leading cause of AUB among all age groups. While PCOS was the main factor in adolescence girls, women belonging to age group 20 -31 had both PCOS as well as hypothyroidism as the cause. Age group  $\geq 41$  years had anovulation as the main cause of AUB O.

**KEYWORDS :** Abnormal uterine bleeding, PALM COEIN, polyp.

## INTRODUCTION

AUB (abnormal uterine bleeding) comprises common conditions that effect 14–25% of women of reproductive age.<sup>(1)(2)</sup> FIGO devised a universally acceptable system of nomenclature and classification, namely PALM–COEIN classification of AUB in 2011.<sup>(3)</sup> which stands for Polyp, Adenomyosis, Leiomyoma, Malignancy (and hyperplasia), Coagulopathy, Ovulatory disorders, Endometrial, Iatrogenic and Not otherwise classified. This was in order to standardise definitions, nomenclature and the underlying categories of aetiology. This would facilitate ease of investigation and comparison of similar patient populations and thereby aid research and improve evidence-based care. This study was conducted to analyse the aetiological factors of AUB according to the age distribution of the population. This approach shall help to predict the most common aetiologies of AUB in each age group, thereby aiding in early diagnosis and treatment.

## MATERIALS AND METHOD:

A retrospective observational study was done in the department of Gynaecology and Obstetrics at LallaDed Hospital, Srinagar, Kashmir from September 2020 to December 2021. The various complaints and relevant clinical data, was collected from the OPD records of 100 patients and analysed using Microsoft excel sheet.

## Inclusion Criteria:

All females between the age group of 15 to 50 presenting with complaints of AUB whose evaluatory records were complete and available.

## Exclusion Criteria:

- Patients with:
- liver diseases
  - chronic renal disease
  - known malignancy other than endometrial in origin
  - pregnancy

## RESULTS:

**Table 1: Age Of The Patients**

Age	Number of patients	Percentage
<20	17	17%
21- 30	30	30%
31-40	34	34%
$\geq 41$	19	19%
Total	100	100%

In our study, maximum patients(34) were in age group of 31-40 years followed by 21-30 years(30) and <20 years(17).

**Table 2: Age Of The Patients And Type Of AUB**

Age (years)	AUB P(%)	AUB A(%)	AUB L(%)	AUB M (%)	AUB C(%)	AUB O(%)	AUB I(%)	AUB E(%)	AUB N(%)
$\leq 20$	0	0	1	0	0	16	0	0	0
21 - 30	1	1	2	0	0	18	6	4	0
31 - 40	3	4	5	0	0	15	1	3	0
$\geq 41$	2	5	4	0	0	3	0	0	0
TOTAL	6	10	12	0	0	55	7	7	0

In our study 6% of patients had AUB-P, 10% had AUB-A, 12 %had AUB-L, 55% had AUB-O, 7 %each had AUB-I and AUB-E. In AUB-P group maximum patients were in age group of 31 to 40 years. In AUB-A group maximum patients were in age group of greater or equal to 41 years. In AUB-L maximum patients were in age group of 31 to 40 years. In AUB-O, AUB-I & AUB-E maximum patients were in age group of 21 to 30 years.

## Additionally:

AUB L+P = 31-40 yrs (3 and 5 respectively)

AUB A+P =  $\geq 41$  yrs (5 and 2 respectively)

AUB A+L =  $\geq 41$  yrs (5 and 4 respectively)

**Table 3: Age And Type Of AUB O**

Age (years)	PCOS (%)	Anovulation (%)	Hypothyroidism (%)	Hyperprolactinemia (%)	Endometriosis (%)	Others (%)
$\leq 20$	12	1	0	2	0	1
21-30	6	3	6	1	0	0
31-40	2	5	4	1	2	1
$\geq 41$	0	5	1	0	0	0

Among AUB O, most patients in adolescence age group had PCOS followed by hyperprolactinemia and hypothyroidism, whereas most common cause of AUB O in perimenopausal age group was anovulation, confirmed by HPE report.

Maximum patients with PCOS and Hyperprolactinemia were less than 20 years of age (12% and 2%), whereas hypothyroidism and PCOS were common in age group of 21-30 years (6% each).

**Table 4: Age And AUB I**

Age (years)	DMPA (%)	IUCD (%)	Erratic use of OCPs(%)	Erratic use of E-pill (%)
$\leq 20$	0	0	0	0
21-30	2	2	1	1

31-40	1	0	0	0
>=41	0	0	0	0

Most cases of AUB I belonged to the age group of 21 – 30 years. Use of various types of contraceptives was the only cause of AUB I found in our study. AUB due to DMPA and IUCD were most common as it is a known side effect, however erratic use of contraceptive pills was found to be another reason for AUB I.

Maximum patients with AUB I due to DMPA usage and IUCD insertion belonged to 21-30 years age group.

**Table 5: Age And AUB P**

Age (years)	Endometrial polyp (%)
<=20	0
21-30	1
31-40	2
>=41	3

AUB-P was more common in perimenopausal age group. Endocervical polyp was rare and present along with leiomyoma.

Maximum patients were >=41 years of age followed by 31-40 years.

### DISCUSSION:

Abnormal uterine bleeding is the most frequent complaint seen in patients attending out patient department. Majority of cases of AUB are seen in late reproductive age group (30-40 years) where the incidence has been between 37.5-56%<sup>(45)</sup>. In our study, maximum patients (34%) were in age group of 31-40 years followed by 21-30 years (30%) and <20 years (17%). The results were similar in a study conducted by Preeti et al (\$) in which 31.8% women belonging to the age group of 30 – 39 yrs presented with AUB. Similar incidence was reported by Yusuf et al and Muzaffar et al in their study<sup>(67)</sup>. The commonest age group presenting with excessive bleeding in the study done by Muzaffar et al was 41-50 years (48.1%) followed by 31-40 years (39.2%) and 21-30 years (12.7%). The reason may be due to the fact that these patients are in their climacteric period. As women approach menopause, cycles shorten and often become anovulatory.

In our study, most common cause of AUB was AUB O (55%), followed by AUB L (12%), whereas, 6% patients had AUB-P, 10% had AUB-A, 7% each had AUB-I and AUB-E. In AUB-P and AUB A group maximum patients were in age group of >=41 years. In AUB-L maximum patients were in age group of 31 to 40 years. In AUB-O, AUB-I & AUB-E maximum patients were in age group of 21 to 30 years. According to the study done by Gourie et al<sup>(8)</sup> maximum patients had ovulatory dysfunction (27%) followed by leiomyoma (24%). Similar results were shown by study done by Goel P et al<sup>(9)</sup> ovulatory dysfunction was found to be the most common cause of AUB (28.3%) followed by leiomyoma (22.7%).

Among AUB O, most patients in adolescence age group had PCOS followed by hyperprolactinemia and hypothyroidism, whereas most common cause of AUB O in perimenopausal age group was anovulation, confirmed by HPE report. The reason behind this bleeding is due to dysfunction of HPO axis. The major factors affecting HPO axis are PCOS, thyroid disorders, obesity and hyperprolactinemia<sup>(10)</sup>. Maximum patients with PCOS and Hyperprolactinemia were less than 20 years of age (12% and 2%). In a study done by Yusuf et al. maximum patients with hypothyroidism belonged to 21-30 years age group<sup>(6)</sup>.

Most cases of AUB I belonged to the age group of 21 – 30 years. Use of various types of contraceptives was the only cause of AUB I found in our study. AUB due to DMPA and IUCD were most common as it is a known side effect, however erratic use of contraceptive pills was found to be another reason for AUB I. Maximum patients with DMPA usage and IUCD insertion belonged to 21-30 years age group.

AUB P was most common in perimenopausal age group. Endocervical polyp was rare and present along with leiomyoma. Maximum patients were >41 years of age<sup>(5)</sup> followed by 31-40 years<sup>(2)</sup>. Most common symptom associated with polyp is abnormal bleeding occurring in approximately 68% of both pre and post menopausal women<sup>(11)</sup>. Similar results were found in study done by Mary Gayle et al.<sup>12</sup>

### CONCLUSION:

AUB is a common symptom of various gynaecological

conditions. AUB O was the leading cause of AUB among all age groups. While PCOS was the main factor in adolescence girls, women belonging to age group 20 -31 had both PCOS as well as hypothyroidism as the cause. While in perimenopausal age group of >= 40, metropathiahemorrhagica due to anovulation was the most common cause of AUB O. Thus while evaluating patients for AUB these factors should be kept in mind in respective age groups. Mere history taking along with special emphasis on age and bleeding pattern with simple gynaecological examination can help in making diagnosis in outpatient department.

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