Original Investigations

Abnormal uterine bleeding types according to the PALM-COEIN FIGO classification in a medically underserved American community

Sabre et al. AUB in an underserved American community

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Abstract

Objectives: To describe the distribution of abnormal uterine bleeding (AUB) type according to the PALM-COEIN (polyp; adenomyosis; leiomyoma; malignancy and hyperplasia; coagulopathy; ovulatory dysfunction; endometrial; iatrogenic; and not yet classified) International Federation of Gynecology and Obstetrics (FIGO) classification system in a medically underserved American inner-city population. Our secondary objective was to find an association between risk factors and type of AUB.

Material and Methods: We conducted a descriptive cross-sectional analysis at our outpatient women's health clinic located in The Bronx, New York City in the time frame from November 2016 to December 2019.

Results: In our study of 390 patients, the most common AUB type was AUB-L (n=185, 47.4%), followed AUB-P (n=100, 25.6%), AUB-A (n=55, 14.1%), AUB-O (n=19, 4.9%), AUB-M (n=15, 3.8%), AUB-E (n=14, 3.6%) and AUB-I (n=2, 0.5%). Race was distributed as follows: Hispanic (68.2%), Black (25.9%), Caucasian (3.3%), and Asian (2.1%). Comorbidities included hypertension (36.4%), diabetes (15.6%), and thyroid disease (6.9%). The median age of diagnosis was significantly higher in AUB-M (59 years old, p<0.001), AUB-P (52.5 years old, p<0.001), AUB-E (51.5 years old, p=0.001) compared to AUB-L (46 years old). The median BMI (body mass index) was significantly higher in AUB-E (34.2 kg/m^2, p=0.048) and AUB-O (32.6 kg/m^2, p=0.038) compared to AUB-L (30 kg/m^2). Race was equally distributed among the AUB types. AUB-M (66.6%, p=0.002), AUB-E (57.1%, p=0.022), AUB-P (47%, p<0.001), AUB-A (30.8%, p<0.001), ~~and~~ had statistically significantly more cases of hypertension compared to AUB-L (28.1%). AUB-P (27%, p<0.001), AUB-M (26.6%,

p=0.025), AUB-E (35.7%, p=0.001) and AUB-A (9%, p<0.001) had more ~~higher~~ patients with diabetes mellitus than AUB-L (3.3%).
Conclusion: In an American population of medically underserved patients, the most common cause of AUB was leiomyoma and the most common race was Hispanic. Women with AUB-L were younger, with lower BMI, and with fewer cases of hypertension and diabetes mellitus when compared to other types of AUB.
Keywords: Abnormal Uterine Bleeding, comorbidity, FIGO classification, PALM-COEIN, Race, AUB

Introduction

Abnormal uterine bleeding (AUB) is a common medical condition experienced by approximately one-third of women in their lifetime (1,2). AUB is a broad term that describes irregularities in the menstrual cycle involving frequency~~, regularity~~, duration, and volume of flow outside of pregnancy (3). AUB is diagnosed in both inpatient and outpatient settings, accounting for up to 70% of consults to gynecologists (4). The International Federation of Gynecology and Obstetrics (FIGO) created a reproducible classification system for AUB in 2011 (5). The nomenclature for this spectrum is commonly known by the acronym PALM-COEIN. The etiologies correlate to structural disorders such as endometrial/uterine polyp (P), adenomyosis (A), leiomyoma (L), malignant lesions of the uterine body (M); and nonstructural disorders such as coagulopathies (C), ovulatory dysfunction (O), endometrial dysfunction (E), iatrogenic (I), and not yet classified (N) (6).

AUB might lead to severe anemia and other medical complications and it can significantly impact the patients' quality of life. Several medical and surgical therapies are available, and they are personalized based on the acuity and severity of the AUB. Hormonal medications, endometrial ablation, hysteroscopic surgery, hysterectomy, and uterine artery embolization are some of the most common employed therapeutic options. This common disorder has high direct and indirect costs to the economic system: Frick et al. reported financial losses greater than $2000 per patient annually due to absence from work and home management costs (7).

Due to the excessive burden that this disorder places on both patients and healthcare systems, it is important to completely describe occurrence and risk factors associated with AUB in all the populations, including the women most at risk because they live in and underserved areas of the nation.

Other studies have demonstrated the disparities of care which occur in ethnic minorities and the access and management given in gynecological pathology in the US (8–10). Descriptive studies of AUB subtypes distribution in a population in the United States (US) have never been performed. Our aim is to characterize the subset of patients who presented with AUB according to the FIGO classification in an underserved American metropolitan center.

Materials and Methods

We conducted a descriptive cross-sectional analysis in the outpatient women's health clinic located in a medically underserved area of The Bronx, New York City in the time frame from November 2016 to December 2019.

Our center is located in a high-volume hospital-based clinic that serves 31% of the health care visits in the community where there is fewer than one primary care physician for every 4,000 people (11). The location has allowed access to a unique demographic of New York City's

population, with some of the city's most ill and impoverished concentrated in its surrounding neighborhoods.
The study was approved by the New York Health and Hospitals/Lincoln Institutional Review Board (n° 19-034). Informed consent was not required because the retrospective nature of the study, the research involves no more than minimal risk to the subjects and the waiver will not adversely affect the rights and welfare of the subjects.
We excluded pregnant patients. We included patients with AUB defined as any variation from normal bleeding patterns in ~~non-pregnant~~ women lasting for a period of at least 6 months. The AUB was further characterized according to the FIGO PALM-COEIN classification. The diagnosis was based on one or more of these investigations: history, physical examination, sonogram, hysteroscopy, dilatation and curettage, endometrial biopsy and serum analyses. In addition, we recorded the following risk factors: age, body mass index (BMI), race and comorbidities.

Statistical Analysis
We used the software SPSS (IBM Corp. Released 2020. IBM SPSS Statistics for Macintosh, Version 27.0. Armonk, NY: IBM Corp) for statistical analysis to test if the risk factors were associated with a specific AUB subtype. Continuous variables were expressed as median [25°-75° percentile]. Categorical variables were expressed with number of cases/totals. The normality of the data was checked with the Kolmogorov-Smirnov normality test. All the variables were not normally distributed. Continuous variables were tested with the Mann-Whitney test and categorical variables with the Chi-square test. A p-value <0.05 was considered statistically significant.

Results
We included 390 women in the study. We listed the demographic characteristics of the study population according to the FIGO AUB classification in table 1.
AUB-L was found to be the most common AUB type (n=185, 47.4%), followed by AUB-P (n=100, 25.6%), AUB-A (n=55, 14.1%), AUB-O (n=19, 4.9%), AUB-M (n=15, 3.8%), AUB-E (n=14, 3.6%) and AUB-I (n=2, 0.5%). We did not find any case of AUB-C and AUB-N.
The median age was 47 [42-53] years old. The median BMI was 30.4 [27.6-34.9] kg/m^2.
Race was distributed as follows: Hispanic (n=266, 68.2%), Black (n=101, 25.9%), Caucasian (n=13, 3.3%), and Asian (n=8, 2.1%) (Fig.1).
Comorbidities were distributed as follows: hypertension (n=142, 36.4%), diabetes (n=61, 15.6%), and thyroid disease (n=27, 6.9%) (Fig.2).
Table 2 shows the comparison of the minority AUB types to the majority type (AUB-L) in regard to BMI, age, and chronic medical conditions. The median age was significantly higher in AUB-P (52.5 years old, p<0.001), AUB-M (59 years old, p<0.001), AUB-E (51.5 years old, p=0.001) compared to AUB-L (46 years old). The median BMI was significantly higher in AUB-O (32.6 kg/m^2, p=0.038) and AUB-E (34.2 kg/m^2, p=0.048) compared to AUB-L (30 kg/m^2). Race and thyroid disease were equally distributed among the AUB types.
AUB-M (10/15, 66.6%, p=0.002), AUB-E (8/14, 57.1%, p=0.022), AUB-P (47/100, 47%, p<0.001) and AUB-A (17/55, 30.9%, p<0.001) had statistically significantly more cases of hypertension compared to AUB-L (52/185, 28.1%). AUB-E (5/14, 35.7%, p=0.001), AUB-P

(27/100, 27%, p<0.001), AUB-M (4/15, 26.6%, p=0.025) and AUB-A (5/55, 9%, p<0.001) had a statistically higher number of patients with diabetes mellitus than AUB-L (13/390, 3.3%).

Discussion

In our study population, the most common type of AUB was AUB-L, followed by AUB-P, AUB-O, AUB-A, AUB-E, AUB-M and AUB-I. We did not find any case of AUB-C and AUB-N.

AUB-L

In our study we found 185 (56.4%) patients with AUB-L.

Leiomyomas are benign monoclonal tumors of uterine smooth muscle tissue. They are the most common pelvic tumor in reproductive age women. The relationship between myomas and AUB is not completely known. Current knowledge suggests that cellular and molecular changes in myomatous tissue may impact on neo-angiogenesis and the release of growth factors (12).

Our results are in accordance with three other studies on populations from India.

Betha et al. in 2017 found that in a population of 250 Indian women of age range 25-45 years old, leiomyoma was the most common cause of AUB with 30.4% of the cases (13). Ratnani and Meena in 2017 found that in a population of 300 Indian women of age range 20-70 years old, AUB-L was the most prevalent with 35% of the cases (14). Gouri et al. in 2016 found that, out of 300 women included in the study, with age range 15-45 years old, AUB-L was the most prevalent subtype, with 24.6% of the cases (15).

AUB-P

In our study, polyp (AUB-P) was responsible for 25.6% of cases (n=100).

Polyps are generated as endometrial outgrowths within the uterine cavity. Most polyps are diagnosed through transvaginal pelvic ultrasound. Histological examination is mandatory in order to exclude any malignancies (16). Our prevalence of AUB-P is higher than what found in other studies. Indeed, in previous studies the prevalence of AUB-P ranged from 2 to 16% of all AUB types.

Seetha et al in their study in 2020 analyzed 350 patients with AUB, 18-45 years old, with a prevalence of 9 (2.5%) of cases for AUB-P, in a population of patients from India (17). Gouri et al. in 2016 analyzed the causes of AUB in 300 patients from India with age range 15-45 years old and found 6 (2%) of AUB-P (15). Ratnani and Meena in 2017 found 40 patients (13.3%) with AUB-P out of a total of 80 patients with AUB in India aged 20-70 years old (14). Betha et al. in 2017 on 250 patients in India aged 25-45 years old found 26 (10.4%) patients with AUB-P (13). Srinivas and Mattaparti in 2019 found AUB-P in 9 (4.8%) of the total 89 cases aged up to 75 years in an Indian population (18). Goel et al. in 2016 in India found, in patients without age restriction, 8 AUB-P (2.6%), out of 300 total cases of AUB (19). Yu Sun et al. in 2018 in China, out of 1053 patients with AUB aged 15-55 years old, found AUB-P in 171 (16.2 %) (20).

AUB-A

Our study identified AUB-A in 55 (14%) patients of the total 390 patients of the study population.

Adenomyosis is characterized by the presence of endometrial glands and stroma locally or globally through the uterine musculature, causing hypertrophy of the surrounding myometrium.

The pathogenesis of this disorder is not completely known. The diagnostic suspicion of this disorder can be reached through a clinical history characterized by dysmenorrhea and diagnostic tools such as ultrasound or magnetic resonance. The definitive diagnosis is however obtained with histological examination after hysterectomy.
Our findings of 14% AUB-A prevalence are in accordance with the previous literature on women from India and China. Indeed, a range of 4.9 to 20% of patients with AUB-A out of a total of patients with AUB is described in the previous literature.
Seetha et al. in 2019 in India on 350 women with AUB, found cases 30 (8.5%) of AUB-A out of 350 women with AUB (17).
Gouri et al. in 2016 analyzed the causes of AUB in 300 patients from India with age range 15-45 years old and found 38 (12.6%) of AUB-A (15). Ratnani and Meena in 2017 found 60 patients (20%) with AUB-A out of a total of 80 patients with AUB in India aged 20-70 years old (14).
Betha et al. in 2017 on 250 patients in India aged 25-45 years old found 30 (12%) patients with AUB-A (13). Srinivas and Mattaparti in 2019 found AUB-A in 12 (6.4%) of the total 89 cases aged up to 75 years in an Indian population (18). Goel et al. in 2016 in India found, in patients without age restriction, 28 AUB-A (9.33%), out of 300 total cases of AUB. Seetha et al.in analysis of 350 women with AUB, found 30 cases (8.5%) of AUB-A out of 350 women with AUB (19).
Yu Sun et al. in 2018 in China, out of 1053 patients with AUB aged 15-55 years old, found AUB-A in 52 (4.94%) (20).

AUB-O
We found 19/390 (4.9%) with AUB-O.
AUB-O is characterized by a persistent anovulatory state, ultimately leading to irregular endometrial tissue creation, which predisposes to abnormal sloughing of endometrial tissue and bleeding episodes. Ovulation is regulated by circulating levels of estrogen and progesterone, which have been highly associated with differences in race (21).
Yu Sun et al., in 2018, found that the main cause of AUB in 1053 Chinese women in hospital settings, aged 15 to 55 years, was ovarian dysfunction (n=608, 57.7%) (20). In 2020, Seetha et al. found that ovulation impairment represented the most common cause of AUB, 99 patients (28.2%) after analyzing 350 women of age range 18-45 years old in India (17). Goel et al. in 2016 analyzed 300 patients with no age restriction, from India, with AUB and found AUB-O to be the most prevalent with 85 cases (28.3%) (19). The differences of AUB-O prevalence between our study and the studies by Yu Sun et al, Seetha et al, and Goel et al. might be due to differences in population demographics (17,19,20). In fact, only 2.5% of our total study population was of Asian race; the race distribution was not described in Yu Sun et al. and Seetha et al.'s studies but they were both conducted in geographic areas from Asia.

AUB-M
We found 15 women out of 390 (3.8%) affected by AUB-M.
AUB-M is mainly caused by cancers of the uterus. Endometrial cancer, the most recurrent cause of AUB-M, represents the fourth most common cancer in the US after breast, lung and colon cancers (22). Several risk factors have been associated with endometrial cancer such as race, nulliparity, estrogen therapy, early menarche and delayed menopause and Lynch syndrome. However, obesity, hypertension and diabetes as well are indicated in major roles in

its development. Our results are in accordance with the previous literature where the prevalence of AUB-M ranges from 1.9% to 21.6%.
Seetha et al. in 2019 in India on 350 women with AUB, found cases 28 (8.1%) of AUB-M out of 350 women with AUB (17). Gouri et al. in 2016 analyzed the causes of AUB in 300 patients from India with age range 15-45 years old and found 15 (5%) cases of AUB-M (15). Ratnani and Meena in 2017 found 65 patients (21.6%) with AUB-M out of a total of 80 patients with AUB in India aged 20-70 years old (14). Betha et al. in 2017 on 250 patients in India aged 25-45 years old found 19 (7.6%) patients with AUB-M (13). Srinivas and Mattaparti in 2019 found AUB-M in 4 (2.1%) of the total 89 cases aged up to 75 years in an Indian population (18). Goel et al. in 2016 in India found, in patients from India without age restriction, AUB-M 8 (2.6%), out of 300 total cases of AUB (19). Yu Sun et al. in 2018 in China, out of 1053 patients with AUB aged 15-55 years old, found AUB-I in 20 (1.9%) (20).

AUB-E

In our study, we found a total of 14/391 (3.6%) with AUB-E.
AUB-E are intrinsic endometrial causes of abnormal bleeding. The diagnosis of AUB-E is reached when other pathologies are excluded either by imaging or histological sampling in the setting of normal ovulatory function.
Srinivas et al. in 2019 in India studying a population up to 75 years old found that AUB-E was the most common AUB subtype, with 41.9% of the cases (18). Srinivas et al. obtained a histopathological sample for each of their patients. On the contrary, in our study the endometrial samples were obtained only at the clinician's discretion and this could be the reason for the different prevalence of AUB-E between ours and Srinivas et al.'s study.

AUB-I

We found 2 patients with AUB-I, out of 390 total patients (0.5%). They were both over 50 years old, Hispanic, with hypertension.
Both of them were on medications to treat breast cancer and the AUB was manifested as a side effect of these medications. The AUB-I promptly resolved once the medications were discontinued.
Our prevalence result of AUB-I is below the prevalence range found in the literature, ranging from 1 to 11.6%.
Seetha et al. in 2019 in India on 350 women with AUB, found cases 7 (2.2%) of AUB-I out of 350 women with AUB (17). Gouri et al. in 2016 analyzed the causes of AUB in 300 patients from India with age range 15-45 years old and found 24 (8%) cases of AUB-I (15). Ratnani and Meena in 2017 found 3 patients (1%) with AUB-I out of a total of 80 patients with AUB in India aged 20-70 years old (14). Betha et al. in 2017 on 250 patients in India aged 25-45 years old found 29 (11.6%) patients with AUB-I (13). Goel et al. in 2016 in India found, in patients from India without age restriction, AUB-I 13 (4.3%), out of 300 total cases of AUB (19). Yu Sun et al. in 2018 in China, out of 1053 patients with AUB aged 15-55 years old, found AUB-I in 23 (2.1%) (20).
We speculate that the difference between our study and the previous literature may be biased by an under reporting by our providers of AUB-I in our electronic medical system.

Differences of comorbidities among AUB types

All the patients analyzed in the study had BMI > 30 kg/m^2.
In our population, AUB-O and AUB-E had higher BMI than AUB-L. This is likely the results of unopposed estrogen from increased adipose reserves and its effect on both ovulation and the endometrium.
In regard to analysis of age in the population, AUB-P, AUB-M, AUB-E were significantly older than AUB-L. This may be due to the pathogenesis of these specific disorders and the propensity to develop in an older population. The results of our study indicated that hypertension was the most prevalent chronic medical co-morbidity in our patients (n=142, 36.4%), then diabetes mellitus (n=61, 15.6%) and then thyroid disease (n=27, 6.9%) for all the considered groups of AUB type.
AUB-P, AUB-A, AUB-M and AUB-E had statistically significantly more cases of hypertension compared to AUB-L. This might be the effect of hypertension as predominant comorbid condition in advanced ages as these AUB types are seen in that age demographic. The study demonstrated a higher number of AUB-P, AUB-M, AUB-A, and AUB-E patients with diabetes mellitus compared to AUB-L. We speculate that the higher age of AUB-P, M, A and E, compared to AUB-L, likely plays a role in the increased prevalence of diabetes mellitus. Indeed, diabetes and disorders of insulin resistance are chronic medical conditions seen more in geriatric populations.
From our analysis, race differences and distribution of thyroid disease were equally distributed among the AUB types.

Study Limitation
One of the strengths of our study is that it is the first study to describe the distribution of AUB subtypes according to the FIGO PALM-COEIN classification in an urban underserved American population, to our knowledge.
The absence of AUB-C and AUB-N in our population might be biased by limitations of our Electronic Medical Records (EMR) system.
The study also limited the comorbidities which were addressed to the AUB types. Due to limitations in how these are able to be analyzed in the EMR system, only some of the medical comorbidities (hypertension, diabetes and thyroid disease) were collected.
The comparison between this study and other previous studies was difficult in analyzing the distribution of risk factors among AUB types, as they were all heterogeneous regarding age range, time frame, setting, associated factors and diagnostic investigations.

Conclusions
This study serves as a pilot analysis into prevalence of AUB types and chronic medical conditions in minority populations of the inner city of the US. Our finding revealed that leiomyoma represented the most common cause of AUB while the most common race was Hispanic. Moreover, women affected by leiomyoma were younger, with lower BMI and with lower incidence of hypertension and diabetes mellitus when compared to other types of AUB. Future studies are needed to stratify the management options for AUB in these select populations.

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Table 1. Main characteristics of study population

Types of AUB	**AUB-P (n=100/390, 25.6%)**	**AUB-A (n=55/390, 14.1%)**	**AUB-L (n=185/390, 47.4%)**	**AUB-M (n=15/390, 3.8%)**	**AUB-O (n=19/390, 4.9%)**	**AUB-E (n=14/390, 3.6%)**	**AUB-I (n=2/390, 0.5%)**
Age (Years)	52.5 [43.5-59.7]	45 [42-49]	46 [42-49]	59 [52-66]	47 [39-50]	51.5 [45.2-63]	52
BMI (kg/m^2)	31.1 [28-35.7]	29.3 [26-34.3]	30.1 [27.4-33.6]	31.2 [27.4-43]	32.6 [29.9-39.6]	34.2 [28.4-41.2]	28.8
Hispanic (n=266/390, 68.2%)	73/266, 27.4%	37/266, 13.9%	121/266, 45.5%	12/266, 4.5%	13/266, 4.9%	8/266, 3.0%	2/266, 0.8%

Black (n=101/390, 25.9%)	20/101, 19.8%	15/101, 14.8%	56/101, 55.4%	1/101, 1.0%	5/101, 5.0%	4/101, 4.0%	0
Asian (n=8/390, 2.1%)	4/8, 50.0%	1/8, 12.5%	0	1/8, 12.5%	0	2/8, 25.0%	0
Caucasian (n=13/390, 3.3%)	3/13, 23.0%	1/13, 7.7%	7/13, 53.8%	1/13, 7.7%	1/13, 7.7%	0	0
Hypertension (n=142/390, 36.4%)	47/142, 33.1%	17/142, 12.0%	52/142, 36.6%	10/142, 7.1%	6/142, 4.2%	8/142, 5.6%	2/142, 1.4%
Diabetes Mellitus (n=61/390, 15.6%)	27/61, 44.2%	5/61, 8.2%	16/61, 26.2%	4/61, 6.6%	4/61, 6.6%	5/61, 8.2%	0
Thyroid disease (n=27/390, 6.9%)	8/27, 29.7%	7/27, 25.9%	7/27, 25.9%	2/27, 7.4%	1/27, 3.7%	1/27, 3.7%	1/27, 3.7%
AUB= abnormal uterine bleeding, P=polyp, A=adenomyosis, L=leiomyoma, M=malignant lesion, O=ovulatory dysfunction, E=endometrial dysfunction, I=iatrogenic. BMI=body mass index							

Table 2. Comparison of age, BMI, race and comorbidities between patients with AUB-L and the other types of AUB.

Types of AUB	AUB-L (n=185/390,47.4%)	AUB-P (n=100/390, 25.6%)	AUB-A (n=55/390, 14.1%)	AUB-M (n=15/390, 3.8%)	AUB-O (n=19/390, 4.9%)	AUB-E (n=14/390, 3.6%)
Age (years)	45 [38-56]	52.5 [43.5-59.7] p-value <0.001*	45 [42-49] NS*	59 [52-56] p-value <0.001*	47 [39-50] NS*	51.5 [45.2-63] p-value 0.01*
BMI (kg/m^2)	30 [25-39]	31.1 [28-35.7] NS*	29.3 [26-34.3] NS*	32.2 [27.4-43] NS*	32.6 [29.9-39.6] p-value 0.038*	34.2 [28.4-41.2] p-value 0.048*

Race (number of Hispanic/Black)	121/367, 32.9% H 56/367, 15.2% B	73/367, 19.8% H 20/367, 5.4% B NS**	37/367, 10.0% H 15/367, 4.0% B NS**	12/367, 3.2% H 1/367, 0.2% B NS**	13/367, 3.5% H 5/367, 1.3% B NS**	8/367, 2.1% H 4/367, 1.0% B NS**
Hypertension (number/total)	53/390, 13.6%	47/100, 47.0% p-value 0.001**	17/55, 31.0% p-value <0.001**	10/15, 66.7% p-value 0.002**	6/19, 31.6% NS**	8/14, 57.1% p-value 0.022**
Diabetes Mellitus (number/total)	13/390, 3.3%	27/100, 27.0% p-value <0.001**	5/55, 9.0% p-value <0.001**	4/15, 26.7% p-value 0.025**	4/19, 21.0% NS**	5/14, 35.7% p-value 0.001**
Thyroid disease (number/total)	10/390, 2.6%	8/100, 8.0% NS**	7/55, 12.7% NS**	2/15, 13.3% NS**	1/19, 5.3% NS**	1/14, 7.1% NS**

*Mann-Whitney test **Chi-square test. AUB-I was excluded because there were only 2 cases.
BMI=body mass index, AUB=abnormal uterine bleeding, P=polyp, A=adenomyosis, L=leiomyoma, M=malignant lesion, O=ovulatory dysfunction, E=endometrial dysfunction, I=iatrogenic. H=Hispanic, B=Black, NS = not statistically significant

Figure 1. Distribution of races ethnicity (Hispanic, Black, Asian, Caucasian) according to AUB type (AUB-L, M, A, O, P, E, I)
AUB= abnormal uterine bleeding, P=polyp, A=adenomyosis, L=leiomyoma, M=malignant lesion, O=ovulatory dysfunction, E=endometrial dysfunction, I=iatrogenic.

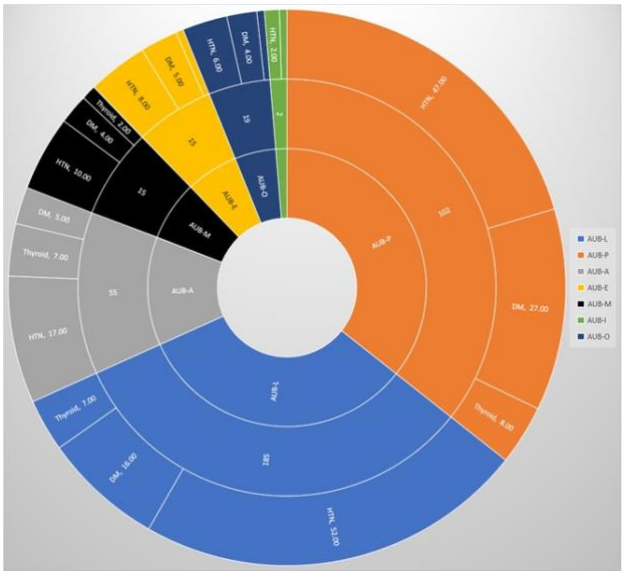

Figure 2: Distribution of comorbidities (HTN, Thyroid Disease, DM) according to AUB type (AUB-L, M, A, O, P, E, I)

HTN= Hypertension, DM= Diabetes Mellitus, AUB= abnormal uterine bleeding, P=polyp, A=adenomyosis, L=leiomyoma, M=malignant lesion, O=ovulatory dysfunction, E=endometrial dysfunction, I=iatrogenic.