CORRELATION BETWEEN TRANSVAGINAL SONOGRAPHY, HYSTEROSCOPIC AND HISTOPATHOLOGICAL FINDINGS IN PATIENTS WITH ABNORMAL UTERINE BLEEDING AT SOUTHERN PHILIPPINES MEDICAL CENTER

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ABSTRACT

Abnormal uterine bleeding (AUB) is a common gynecologic problem that causes discomfort, inconvenience, anxiety and disruption of social life. About one third of gynaecological consultations in routine OPD and nearly two-thirds of hysterectomies are because of abnormal uterine bleeding [3]. Proper Clinical management is aimed at obtaining an accurate diagnosis and charting out the correct line of treatment [5]. In this study revealed transvaginal sonography is an excellent modality for initial evaluation and hysteroscopy is the best modality in assessment and visualization of the lesions in the uterine cavity.

OBJECTIVES

GENERAL OBJECTIVE:

To determine the diagnostic accuracy of TVS and hysteroscopy in our institution in obtaining an accurate diagnosis of the etiology of abnormal uterine bleeding by correlating with the histopathologic findings.

SPECIFIC OBJECTIVES:

1. To establish a demographic and clinical profile of patients who had TVS and underwent hysteroscopy at SPMC.
2. To identify the different causes of abnormal uterine bleeding by the Transvaginal Sonography, Hysteroscopy and Histopathologic Findings.
3. To determine the diagnostic accuracy of TVS and hysteroscopy in detecting abnormal uterine bleeding.

METHODOLOGY

This is a retrospective cross sectional study on patients with abnormal uterine bleeding admitted at the Southern Philippines Medical Center (SPMC) with TVS performed at the SPMC Ultrasound Center for Women and had subsequent hysteroscopy performed at SPMC Center for Minimally Invasive Gynecologic Surgery from January 2018 to December 2019. Using a data collection form, the demographic and clinical profile, transvaginal sonographic findings, hysteroscopic findings and histopathologic findings of the patients were collated, reviewed and analyzed.

RESULTS

A total of 63 patients were recruited in the study. As shown in Table 2, the mean age was 32 years. More than half of the patients were obese at 54%, followed by those with normal BMI (30%), and overweight (16%). 47% of the patients graduated in high school. Thirty seven percent of the multigravid patients were gravida 1 to 2 while 36% were nulliparous. In Table 3, the most common abnormality identified by the TVS was thickened endometrium (44%), followed by endometrial polyp (37%), submucous myoma (10%) and endocervical polyp (5%). In hysteroscopy, the most common abnormal findings visualized were endometrial polyp (36%), followed by endometrial hyperplasia (34%), submucous myoma (14%), malignancy (6%) and endocervical polyp (6%). All these different pathologies were confirmed by histopathologic examination with findings of endometrial polyp at 40%, followed by endometrial hyperplasia (20%), leiomyoma (9%), malignancy (8%) and endocervical polyp (6%). The study shows that 65% of patients who had abnormalities detected by transvaginal sonography correlated with the hysteroscopic findings and were confirmed by the histopathologic examination giving a sensitivity of 69% and specificity of 85% in determining the cause of AUB. The positive predictive value (PPV) was 59% and the negative predictive value was 90% as tabulated in Table 4.

Table 2. Demographic and Clinical Profile of patients with Abnormal Uterine Bleeding who had TVS and underwent hysteroscopy at the SPMC

Variables	Frequency	Percentage
Age		32±18.33
BMI		
Normal	19	30%
Overweight	10	16%
Obese I	16	25%
Obese II	18	29%
Educational Attainment		
Elementary Graduate	8	13%
High school Level	10	16%
High school Graduate	30	47%
College Level	7	11%
College Graduate	8	13%
Gravidity		
0	19	30%
1-2	23	37%
3-4	14	22%
5-6	4	6%
more than 6	3	5%
Parity		
0	23	36%
1-2	20	32%
3-4	14	22%
5-6	3	5%
more than 6	3	5%

Table 3. The identified different causes of abnormal uterine bleeding by the Transvaginal Sonography, Hysteroscopy and Histopathologic Findings.

Findings	No. of Cases	Percentage
Transvaginal Sonography		
Thickened Endometrium	47	44%
Endometrial Polyp	40	37%
Submucous Myoma	11	10%
Endocervical Polyp	5	5%
Malignancy	2	2%
Adenomyosis	1	1%
Endometrial Mass	1	1%
No abnormal findings	1	1%
Hysteroscopy		
Endometrial Polyp	34	36%
Endometrial Hyperplasia	32	34%
Submucous Myoma	13	14%
Malignancy	6	6%
Endocervical Polyp	5	6%
Endometrial Mass	2	2%
Adenomyosis	1	1%
Intrauterine Adhesions	1	1%
Histopathologic Findings		
Endometrial Polyp	34	40%
Endometrial Hyperplasia	17	20%
Leiomyoma	8	9%
Malignancy	7	8%
Endocervical Polyp	5	6%
Adenomyosis	3	4%
Endocervicitis	2	2%
Deciduoid Changes	2	2%
Adenomatous Polyp	1	1%
No abnormal findings	7	8%

Table 4. The diagnostic accuracy of transvaginal sonography and hysteroscopy in detecting abnormal uterine bleeding by correlating to the Histopathologic Findings.

	Histopathologic Findings			
Findings	Sensitivity	Specificity	PPV	NPV
Transvaginal Sonography				
Thickened Endometrium	85%	17%	36%	67%
Endometrial Polyp	75%	6%	64%	10%
Submucous Myoma	73%	38%	62%	50%
Malignancy	14%	83%	50%	45%
Endocervical Polyp	0	33%	0	33%
Hysteroscopy				
Submucous Myoma	73%	25%	57%	40%
Endometrial Polyp	67%	25%	67%	25%
Endometrial Hyperplasia	60%	44%	38%	67%
Endocervical Polyp	50%	50%	40%	60%
Malignancy	29%	33%	33%	29%

CONCLUSION

In conclusion, the diagnostic accuracy of transvaginal sonography and hysteroscopy in this institution in determining the etiology of abnormal uterine bleeding is good but not comparable with current studies. Transvaginal sonography is a practical approach as an initial evaluation of the uterine cavity to detect possible intrauterine abnormalities. Hysteroscopy is the best option in assessing abnormal uterine bleeding because of its direct visualization and samples for histopathology can be obtained.

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