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Evaluation of intrauterine pathology using hysteroscopyin comparison to histopathological examination.

Jasleen kour[1], Parikh Rana,[2] Sukhnein Singh[3], Kamakshi Mam[4]

[1,2,4]*Department of Gynecology and Obstretics GMC Jammu &* [3]*Department Of General Surgery GMC Jammu*

Abstract
Background : *Abnormal uterine bleeding is one of the leading causes for women attending gynaecologist for opinions. Thus better understanding of the causes of abnormal uterine bleeding is required by determining the pattern of intrauterine pathologies through hysteroscopy and to correlate these hysteroscopic findings with histopathological reports.*
The aim and objective of this study was to determine the pattern of hysteroscopic abnormalities and histopathological features of intrauterine pathology and thus to correlate hysteroscopic findings with histopathological findings.
Materials and method: This was a retrospective observational study carried out in postgraduate department of Gynaecology and obstetrics, SMGS hospital Jammu for a period of 1 year over 100 women with complaints of abnormal uterine bleeding.
Results:The most common complaint was heavy menstrual bleeding(40%).On hysteroscopic diagnosis, most common finding was proliferative endometrium(34%), endometrial hyperplasia (30%) and least common findings were submucosal myoma 3% and endocervical polyp(1%). In comparison to this on histopathological examination, most common findings were proliferative endometrium(26%), sectretory endometrium (20%), and least common was endocervical polyp(2%) and submucus myoma(2%). The diagnostic validity was counted over 100 pts and out of this 62 patients were positive for hysteroscopy, 38 had positive findings on histopathological and 14 had negative findings on histopathological examination. Out of 38 pts having normal hysteroscopic findinds,for 36 pts histopathology had consistent findings and 2 samples were discarded due to inadequate sampling.The sensitivity of hysteroscopy was 92.8%,specificity is 64.8% , positive predictive value was 56.2% and negative predictive value 96.8% in diagnosing etiology of intrauterine pathology.
Conclusion: Hysteroscopy has a definitive role in diagnosing and evaluating patients with abnormal uterine bleeding allowing direct visualization of uterine cavity. Although it is a safe and reliable treatment for evaluating benign endometrial lesions, diagonistic hysteroscopy with biopsy procedures are always advised due to the hsteroscopy's poor validity to rule out endometrial hyperplasia and malignancy.
Keywords: *Abnormal uterine bleeding, gold standard, hysteroscopic findings, histopathological findings.*

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I. Introduction

Today, hysteroscopy is considered the investigation of choice for evaluating the uterine cavity, and due to improved endoscopic developments, it can be performed reliably and safely (1,2,3,4). In fact infertility related to uterine cavity abnormalities has been estimated to be casual factor in as many as 10-15% of couples seeking treatment(5,6). Abnormal uterine bleeding is a very common clinical problem which require frequent gynaecological opd visits(7).These are mostly in the perimenopausal and postmenopausal age groups .Diagnostic dilatation and curettage had been regarded as gold standard for this but detection rate is less than 50% (8,9). Hysteroscopy is the easy and new modality for evaluating intrauterine pathology with the advantage of direct visualisation of pathology and taking the biopsy under same sitting under vision(10,11).

II. Materials And Method

The present study entitled " Evaluation of various intrauterine pathology by hysteroscopy and its correlation with histopatholpgy" carried out in the carried out in postgraduate department of Gynaecology and obstetrics, SMGS hospital Jammu June 2021 to May 2022. A number of 100 patients complaining of abnormal uterine bleeding were carefully selected by applying specific inclusion and exclusion criteria.

Inclusion criteria
Women above 18 years to less than 60 years with various complaints like abnormal uterine bleeding, infertility or RPL.

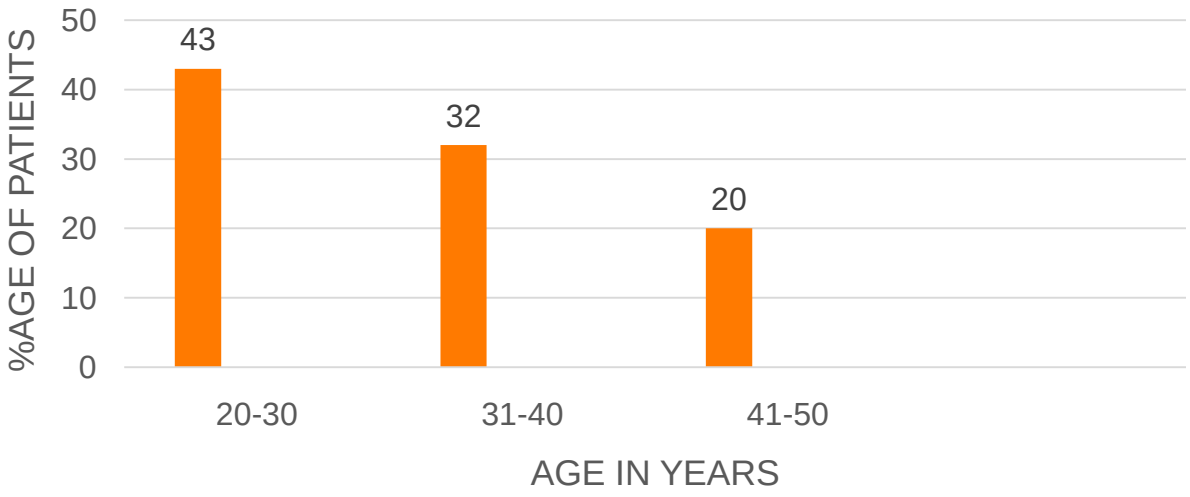
Exclusion criteria
- Patients less than 18 years and more than 60 years of age
- Pelvic infection
- coagulation disorder
- Pregnancy

STATISTICAL Analysis
SPSS software 16.0(Released 2016. IBM SPSS Statistics for windows , Version 24.0 IBM Corp., Armonk,New York) was used for analysis of the data was done. The study included both quantitative and qualitative data.

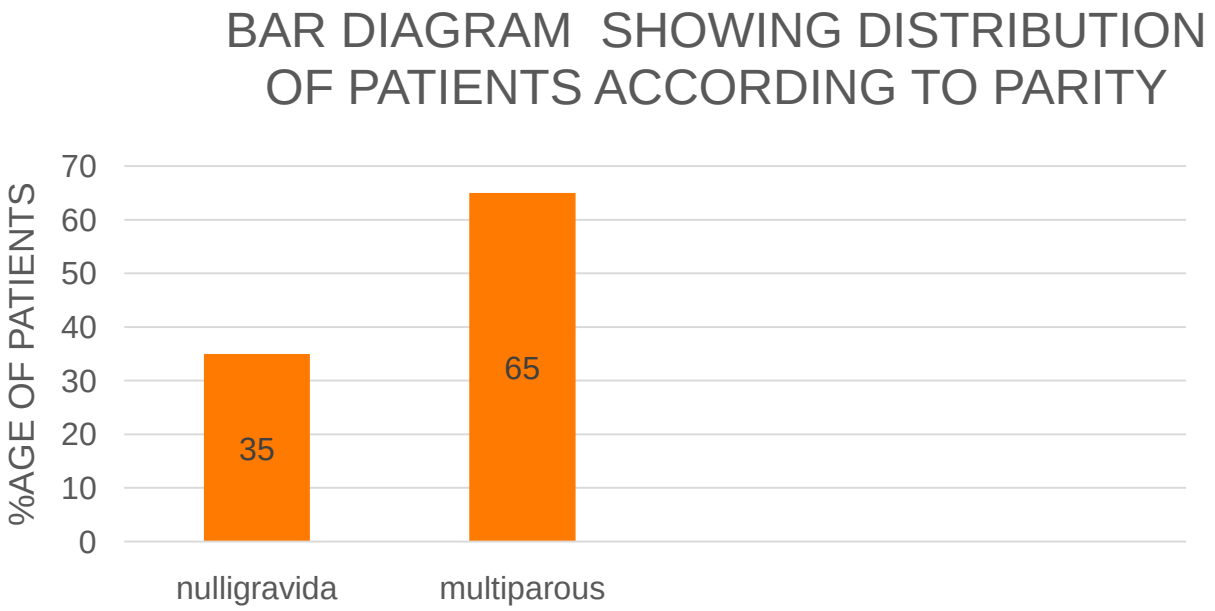
III. Results

In this study the age of patients varied from 20 to 65 years. Abnormal uterine bleeding was most prevalent between women of 2 age group -26 to 30 years and 40-50 years

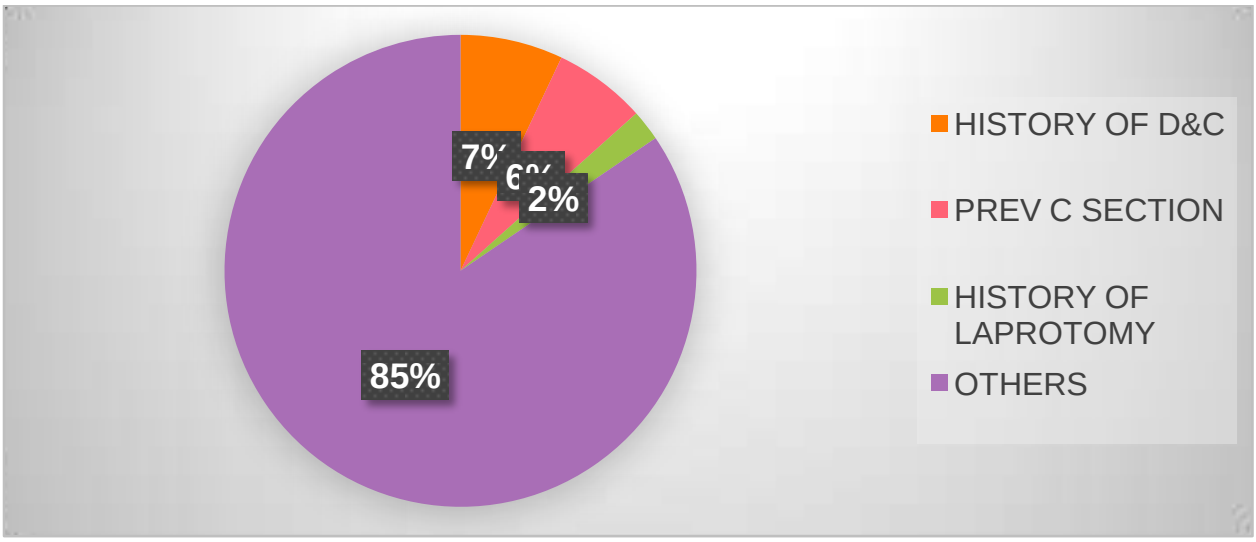
BAR DIAGRAM SHOWING DISTRIBUTION ACCORDING TO AGE



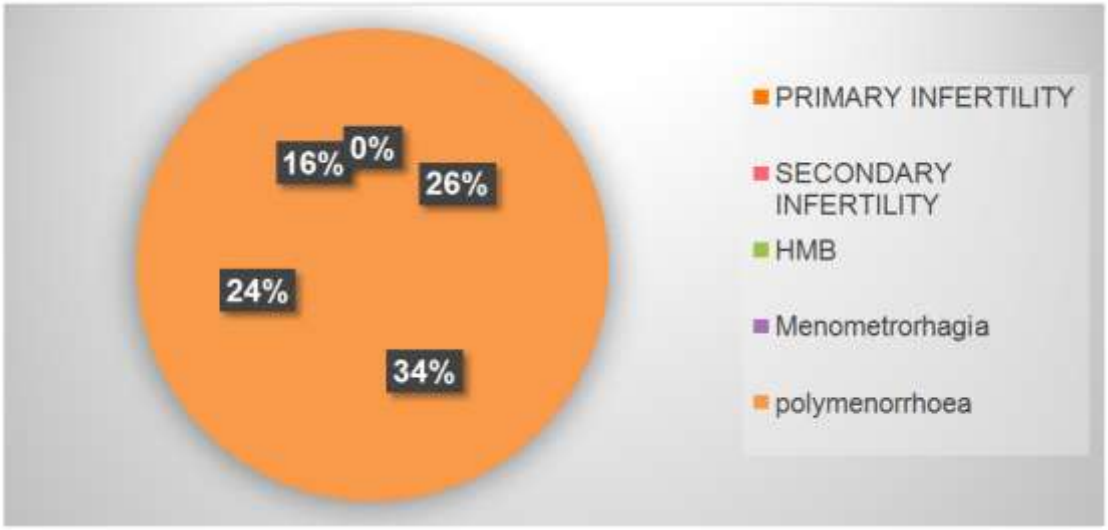
Most common affected women were with multiparity . Also around 79% women were residing in rural areas. About 15% patients were hypertensive, 4% had history of ATT intake and 6% were diabetic.



Out of 100 patients,10% patients had undergone D&C in past , 9% had undergone cesarean section and 2% had undergone suction and evacuation. Five percent of the patients had hemoglobin less than 6 g%, 28% patients had hemoglobin between 6 and 8g%. These patients required blood transfusion

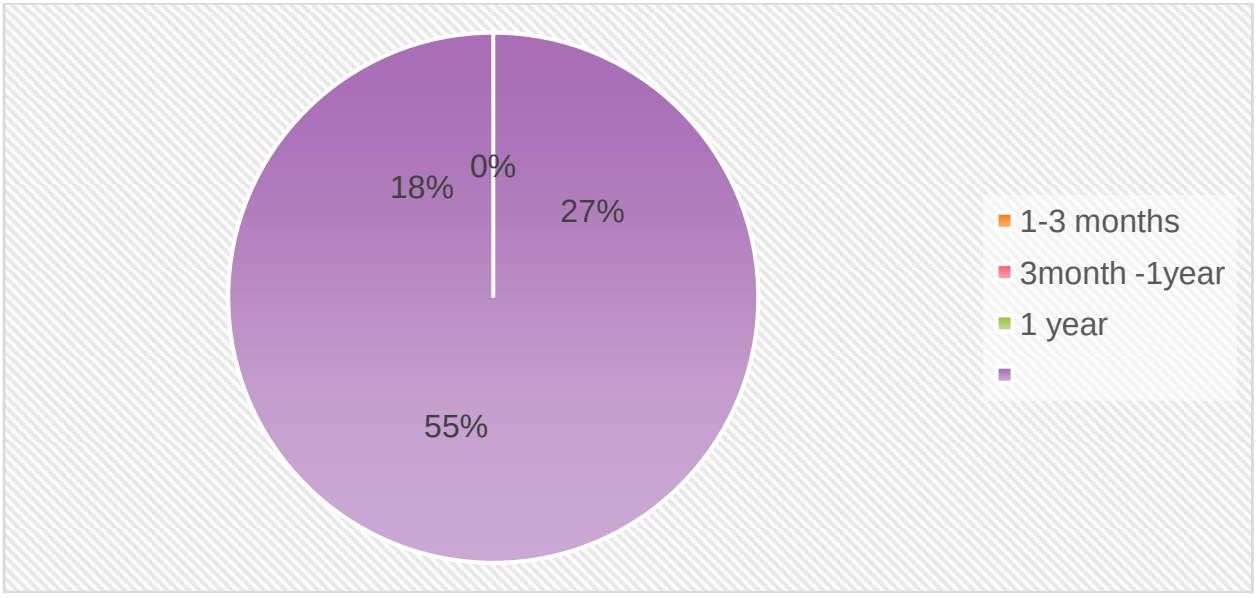


Based on presenting complaint,as shown in this piechart, around 35% presented with infertility, 20% with heavy menstrual bleeding , 9% with menometrrorhagia and 7% with polymenorrhoea.

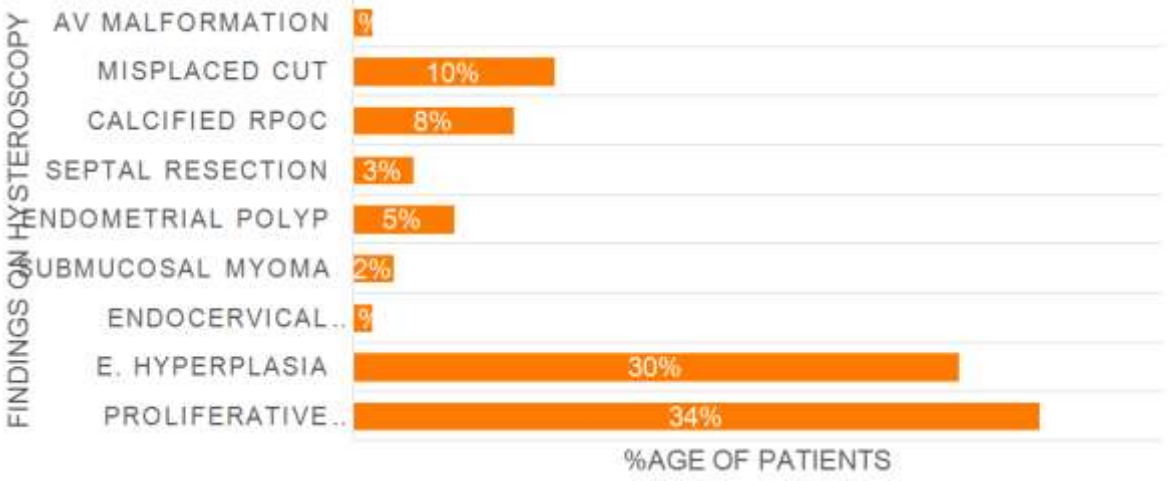


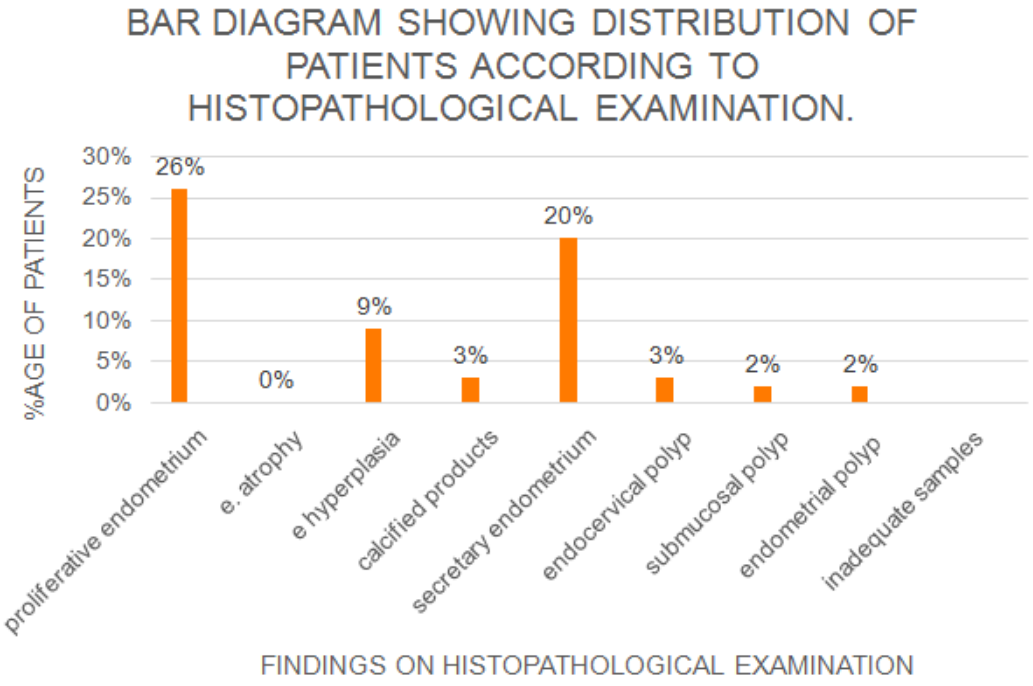
55% patients had complaints for more than 3 months to 1 year duration. Eighteen percent patients presented after 1 year duration, 14% presented after 1–3 months duration because complaints like abnormal uterine bleeding are usually neglected in our country.

PIECHART SHOWING DISTRIBUTION OF PATIENTS ACCORDING TO PRESENTING COMPLAINTS

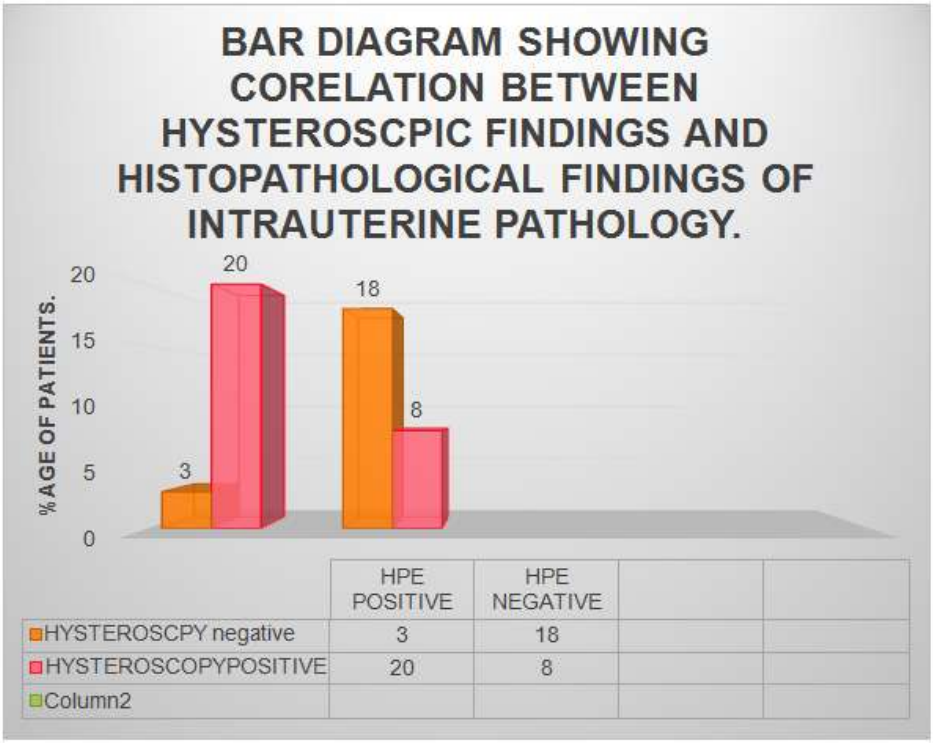


BAR DIAGRAM SHOWING DISTRIBUTION OF FINDINGS IN PATIENTS ACCORDING TO HYSTEROSCOPIC DIAGNOSIS





The diagnostic validity was counted over 100 patients and out of this , 62 patients positive for hysteroscopy ,38 had positive findings on histopathological and 14 had negative findings on histopathological examination.



IV. Discussion

In this retrospective observational study, 100 women between 20 and 65 years of age who presented with various complaints like infertility ,abnormal uterine bleeding pattern ,abnormal [septate] uterus had undergone modalities of investigations to reach a conclusion – diagnostic hysteroscopy and endometrial histpathology report.This study was undertaken to evaluate the use of hysteroscopy to find out various intra-uterine pathology ad then to compare it to histopathological reports

Sensitivity	**95.4%**
Specificity	58.6%
Positive predictive value	60%
Negative predictive value	92%
False positive	39.8%
False negative	8.7%

Hysteroscopy showed 1 case of false negative result ie endometrial hyperplasia and 11 cases of false positive results i.e. endometrial hyperplasia in 5, and cervical polyp in 1, endometrial polyp in 3, submucosal myoma in 2 patients. These lesions were visualized on hysteroscopy but could not be confirmed on histopathology because of blind procedure of curettage for collecting the biopsy sample

Drawbacks of study

This study couldn't be performed in females having pelvic inflammatory disease, other pelvic infections.In unmarried sexually inactive females, informed written consent is to be taken to evaluate intrauterine pathologies.

V. Conclusion

Hysteroscopy is a valuable, simple, low-risk technique which allows an adequate exploration of the uterine cavity under visual control.It ensures speed and safety with the diagnosis and treatment. The results are

immediately available.It is widely accepted that a complete infertility workup should include an evaluation of uterine cavity . Infact infertility related to uterine cavity abnormalities has been estimated to be casual factor for around 10-15% cases.In patients with abnormal uterine bleeding, hysteroscopy provides the possibility of immediate diagnosis and prompt and effective treatment. It allows fnding out the source of bleeding and perform a directed biopsy of the suspected area. It affords a more accurate diagnosis than dilatation and curettage for intrauterine pedunculated pathologies. But for hyperplasia and carcinoma endometrium, histopathology is 100% diagnostic. It is a very helpful technique in patients with intrauterine synechiae. Since it can detect their presence, extension and nature, and these can also be removed under visual control with the hysteroscope only. So it can be concluded that hysteroscopy offers an invaluable advantage of direct visualization of any abnormality within the uterine cavity. It does not substitute other diagnostic procedures; rather, it complements them. Hysteroscopy is a safe, simple, quick and economic technique, well-accepted by the patient, with great potential in gynecology. Hysteroscopic-guided biopsy and histopathology are considered as the "new gold standard in evaluating any intrauterine pathology.

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