

Ultrasound Scan and Out-Patient Hysteroscopy correlation for detection of endometrial polyps

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INTRODUCTION

Endometrial polyps are localised hyperplasic overgrowths of endometrial glands and stroma forming projections from endometrial surface and may have various clinical presentations. Endometrial polyps can be diagnosed with ultrasound, saline infusion sonogram or hysteroscopy, which is the gold standard.

OBJECTIVES

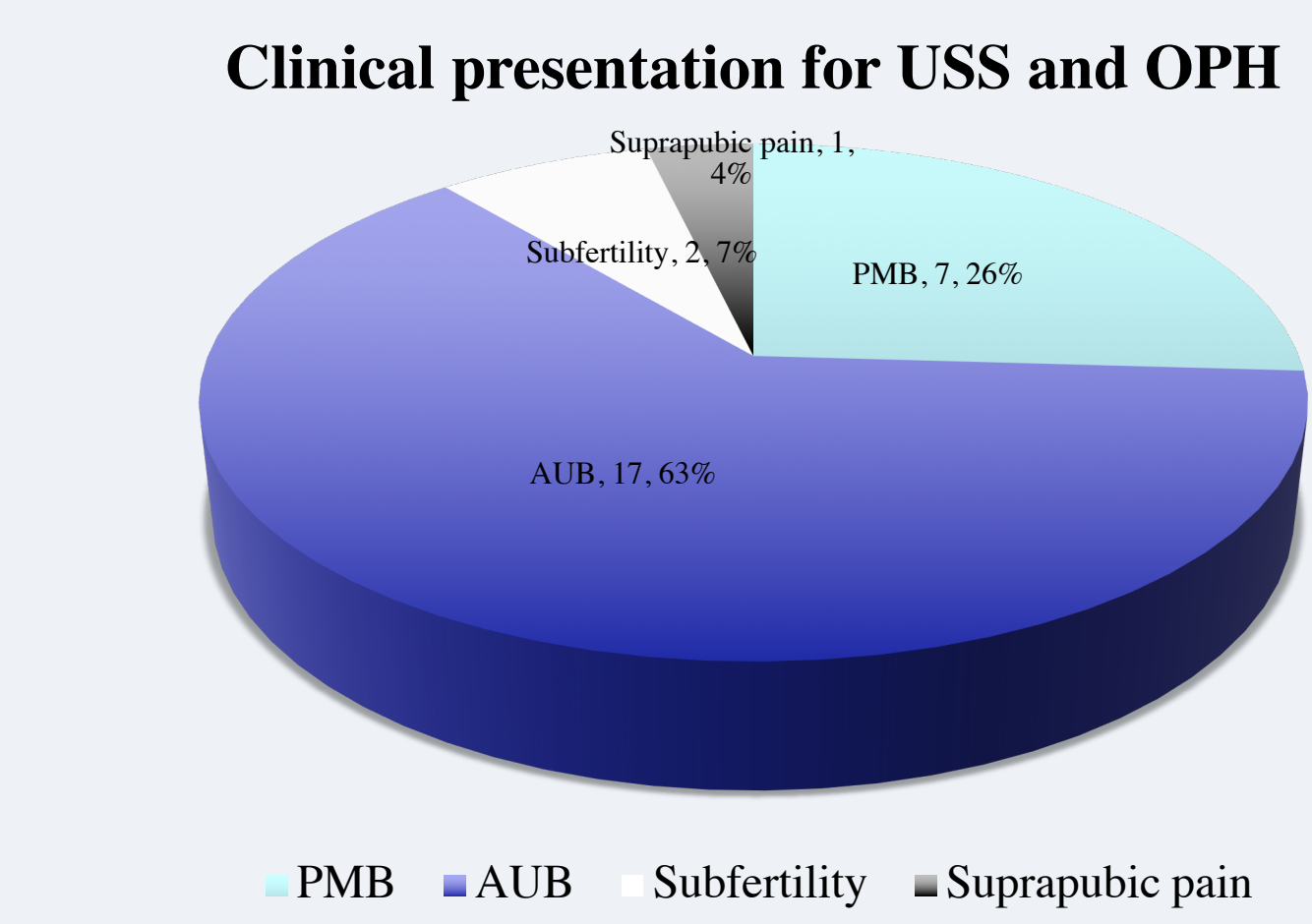
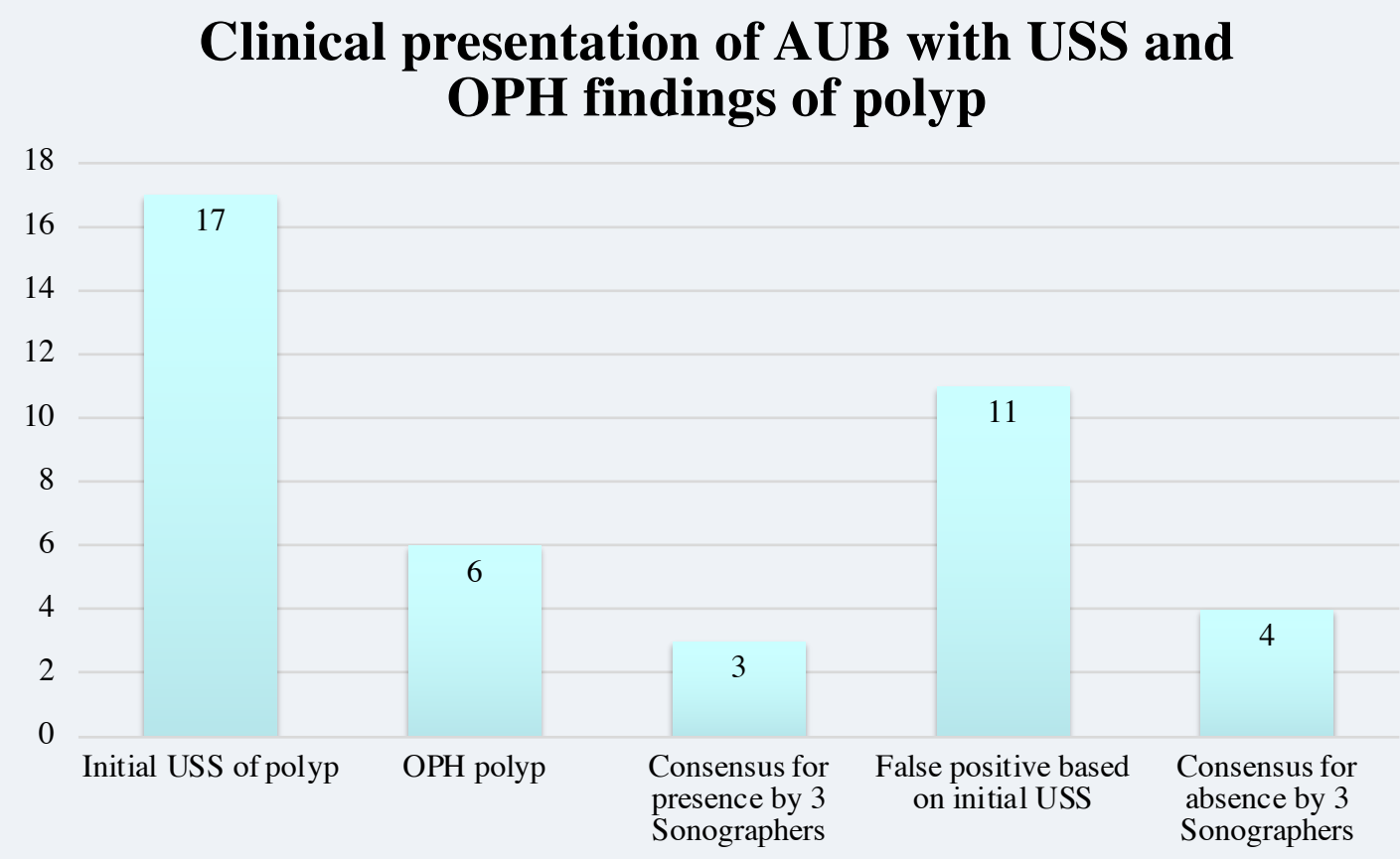
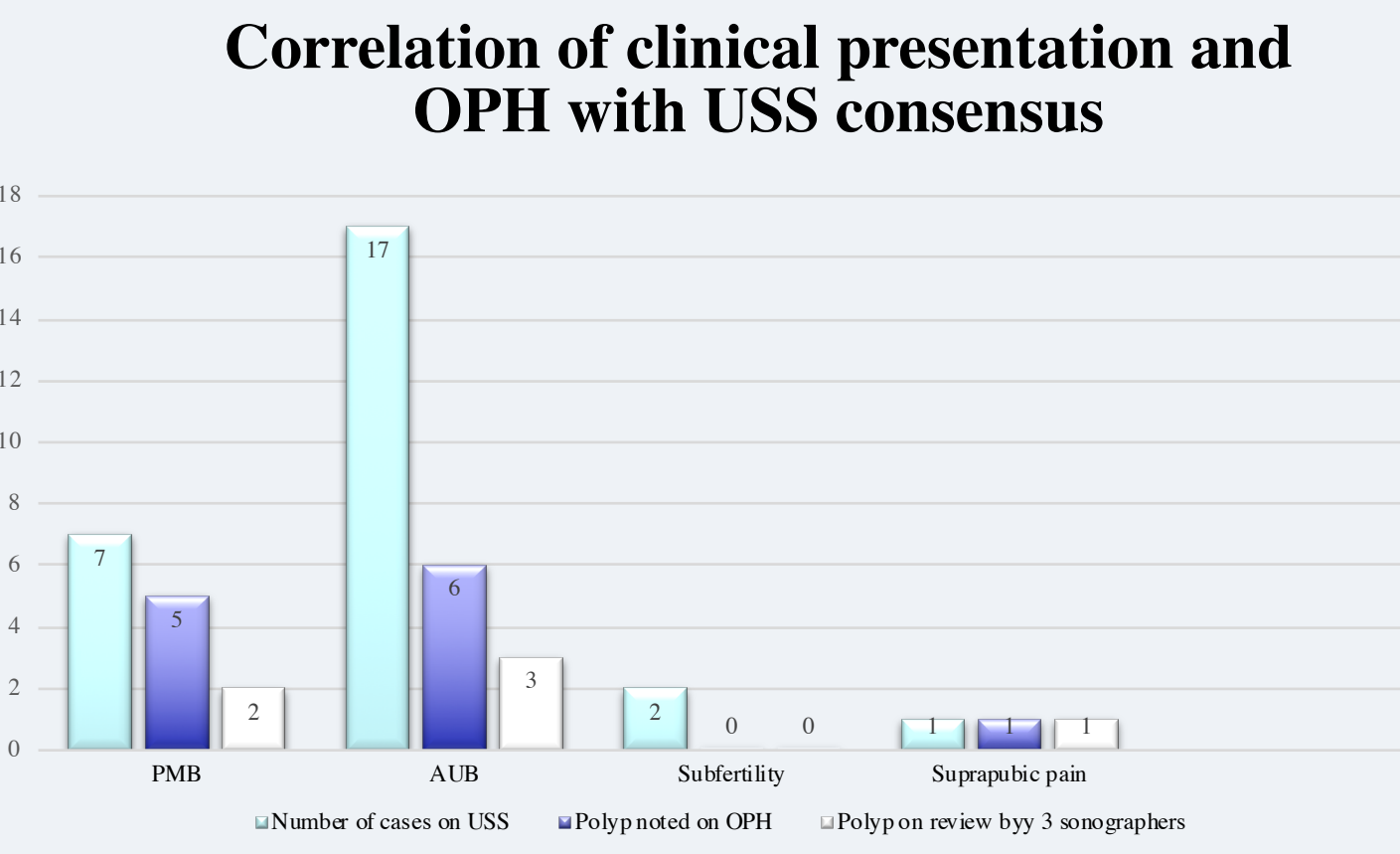
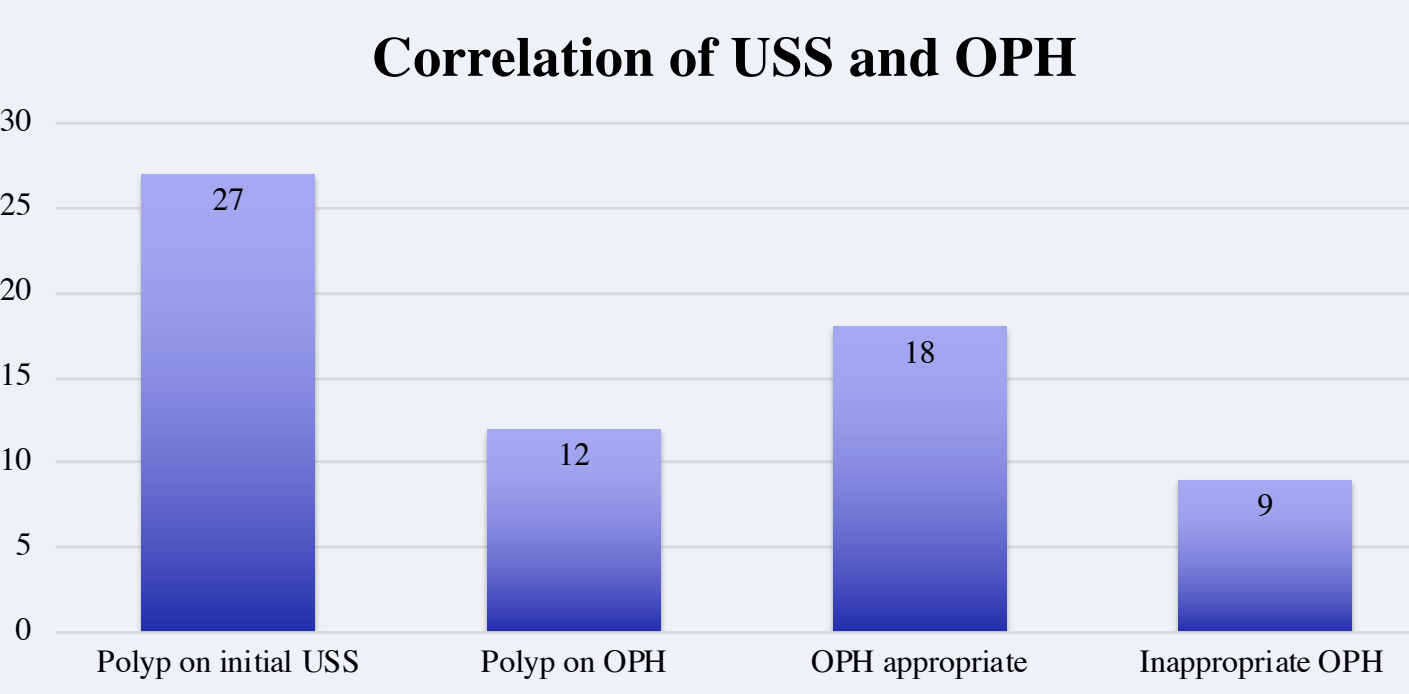
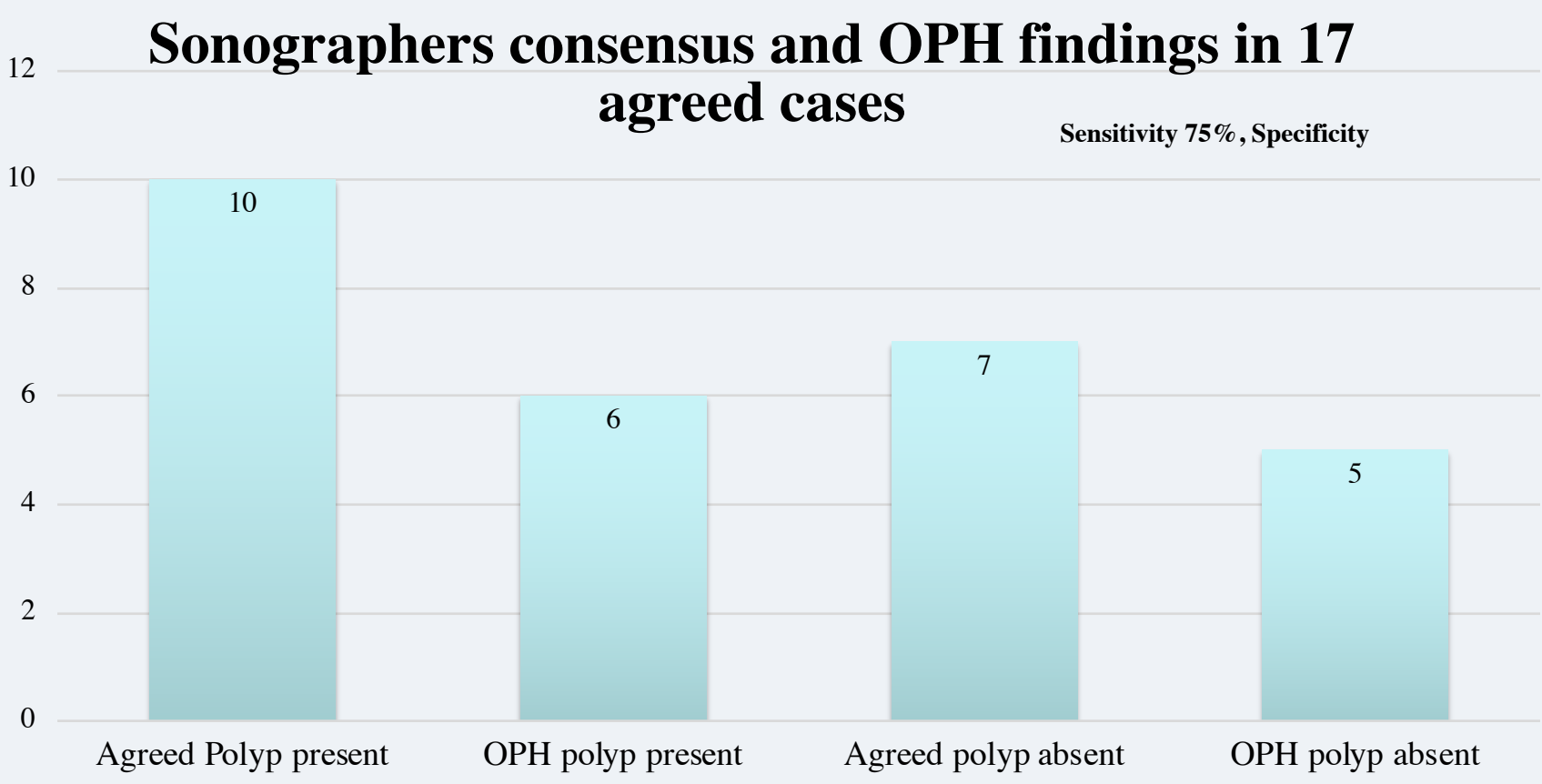
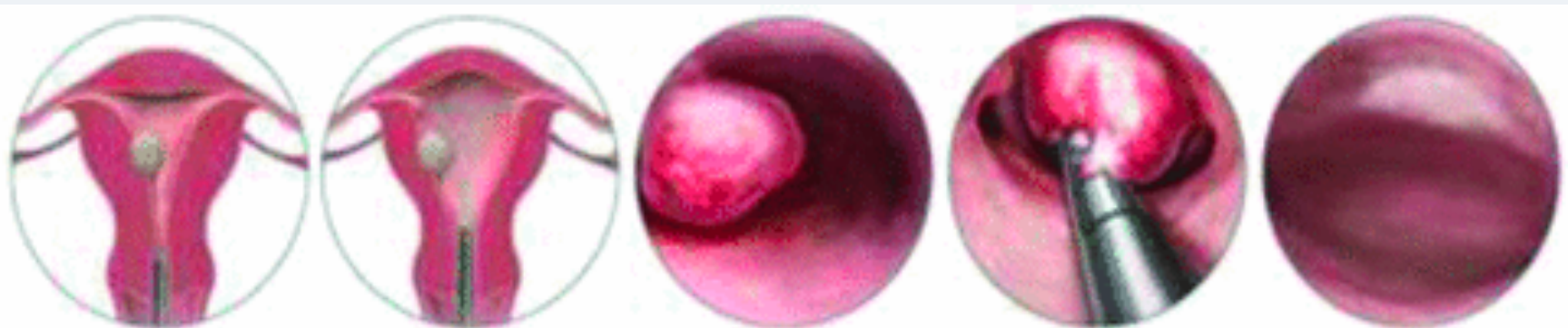
The primary objective of the study is to identify the correlation between initial Ultrasound scan (USS) and Out-patient hysteroscopy (OPH) findings for detection of endometrial polyps, thereby understanding the appropriateness of OPH based on scan findings.

The secondary objective is to identify the consensus and inter-observer variation for interpretation of scan findings when the images were subsequently reviewed by senior Gynaecology sonographers.

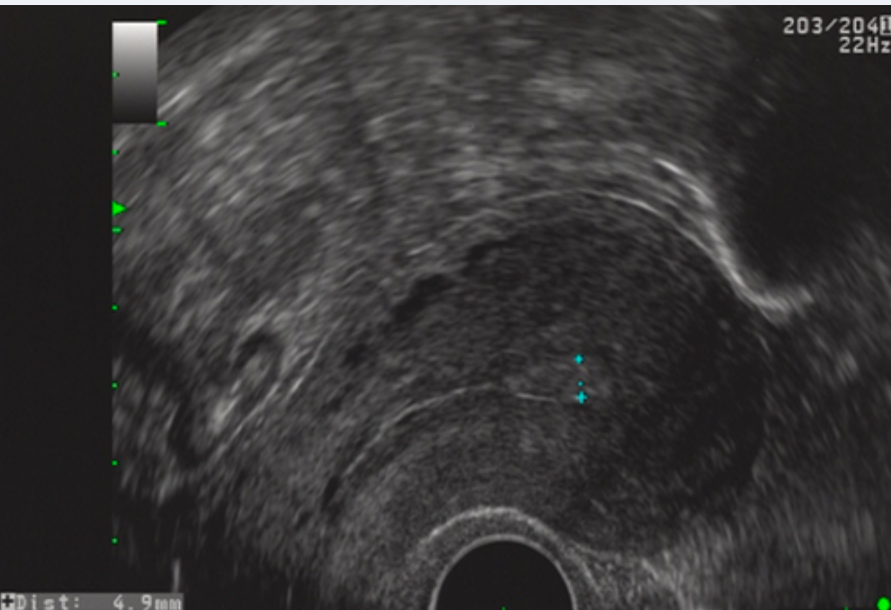
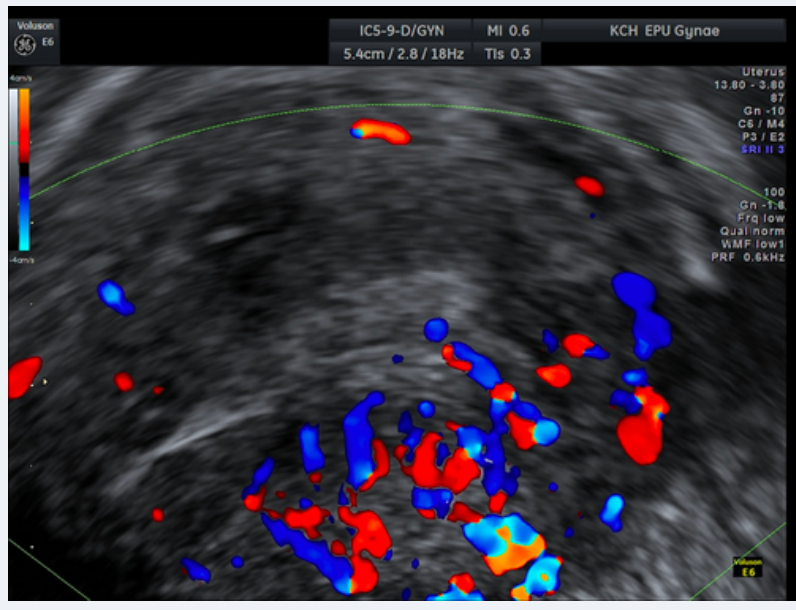
METHODS

This is a prospective study of 2 consecutive years from January 2020 to December 2021 in a District General Hospital where the inclusion criterion was patients attending for OPH of one Gynaecology Consultant with initial Ultrasound suggestive of endometrial polyp. The sample size is 27. Initial Ultrasound and OPH findings were recorded. Ultrasound images were subsequently reviewed and reported by 3 senior Gynaecology Sonographers. The consensus and inter-observer variation regarding reporting of endometrial polyp features amongst them were looked at. Simple statistical methods used to analyse the data.

RESULTS



Hysteroscopy showing presence of uterine polyp



Scan showing endometrial polyp and use of Colour Doppler

DISCUSSION

The total number of cases were 27 (PMB 7, AUB 17, Subfertility 2, Suprapubic pain 1). Initial USS and OPH correlation for the diagnosis of polyp was noted in 12/27 (44.4%). Out of the 17 cases of AUB, only 6 cases had confirmed polyps on OPH, giving a false positive case of 11/17. Appropriateness of OPH was noted in 18/27 (66.7%) based on clinical and scan presentation. All USS images were reviewed again by 3 senior Gynaecology Sonographers. All of them agreed on 17/27 (63%) findings. Out of these 17 cases, 10 cases were confirmed as polyps and 7 cases were confirmed as no polyps by all 3 of them. However, out of the 10 positive cases, true positive (polyp seen on OPH) were in 6 cases and out of the 7 negative cases, true negative (polyp not seen on OPH) were in 5 cases.

CONCLUSION

The results have not shown a strong correlation between initial USS and subsequent findings of polyps on OPH leading to one-third (9/27) of unnecessary OPH procedures. There is a significant inter-observer variation in 10/27 (37%) cases in terms of reporting the ultrasound findings of endometrial polyps. Also, in the 17 agreed reports, TVS has sensitivity of 75%, specificity of 55.5%, positive predictive value of 60% and negative predictive value of 71.4% for detection of endometrial polyps when compared with out-patient hysteroscopy.

Literature shows the accuracy of TVS in diagnosing uterine polyps varies across test accuracy studies with accuracy estimates ranging from sensitivities of 19-96%, specificities between 53-100% and positive predictive values of between 75 and 100% and negative predictive values of 87-97% when compared to hysteroscopy and guided biopsy. Another study showed that compared with hysteroscopy, transvaginal ultrasonography had 96% sensitivity, 86% specificity, 91% positive predictive value and 94% negative predictive value in the diagnosis of intrauterine abnormality.

FUTURE WORK

Gynaecology sonographers plan to formulate a consensus for describing endometrial polyps and reporting clearly. This would then minimise the number of unnecessary out-patient hysteroscopies based on scan findings of polyps and use the services more efficiently and cost-effectively.

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