Sonohysterography versus Transvaginal Sonography. A Prospective Blinded Study of 800 Consecutive Patients with Polyps Diagnosed on Sonohysterography. How Accurate is Transvaginal Sonography?

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Introduction: The purpose of this study was to assess the accuracy of transvaginal ultrasound (US) to visualize endometrial polyps diagnosed on sonohysterography (SHG). Numerous factors were assessed to determine factors associated with detection of polyps on transvaginal US.

Materials and Methods: This prospective blinded study selected 800 consecutive patients diagnosed with endometrial polyps on SHG who also had preliminary transvaginal US within 48 hours of the SHG. Multiple factors were assessed including patient age, size of polyp, number of polyps, submucosal fibroids, intramural fibroids, adenomyosis, location of the polyp, blood flow, abnormal bleeding, endometrial thickness, polycystic ovaries and fertility status. The Pearson's chi-square test for independence and T-tests were used to compare the two samples.

Results: 54.1% of the 800 patients (n=433) with polyps diagnosed on SHG had their polyps seen on transvaginal US. Chi-square tests of independence were performed to determine which factors were associated with detection of a polyp on transvaginal US. Only size of the polyp (i.e. < 1cm, < 2cm, > 2cm), the presence or absence of multiple polyps, the presence or absence of submucosal fibroids, the location of the polyp (i.e. fundus vs. non-fundus) and presence or absence of blood flow to the polyp were significantly associated with detection of a polyp on preliminary US (P <0.05). Independent samples T-tests were performed to compare the age and the endometrial thickness of patients whose polyp was detected on preliminary US with those whose polyp was missed. There was no significant difference in the mean age or endometrial thickness between the groups (df = 798, p > 0.05).

Conclusion: Almost half of endometrial polyps seen on SHG were missed on transvaginal US. Multiple factors were associated their detection on US, including polyp size, multiplicity, submucosal fibroids, location of polyps and blood flow. Age, endometrial thickness, intramural fibroids, adenomyosis, polycystic ovaries, abnormal bleeding and fertility status did not prove to be significant.