Transvaginal ultrasound of endometriosis: what are we missing?
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Purpose:
To compare expert guided transvaginal ultrasound (ETVUS) to routine transvaginal ultrasound (TVUS) for the diagnosis of endometriosis.

Methods:
REB-approved retrospective chart review of surgically confirmed endometriosis cases undergoing both ETVUS and routine TVUS for the same indication.

Results:
40 cases met inclusion criteria. Mean patient age at first surgical diagnosis was 31 ± 7 years. Dysmenorrhea (77%) and chronic pelvic pain (74%) were the most common presenting symptoms. Sensitivity of routine TVUS was 25% (10/40), compared to 78% (31/40) with ETVUS (P <0.01). Comparisons were made based on the site and type of lesion. TVUS and ETVUS detected bladder involvement in (0/40) vs. 5% (2/40); ureter (0/40) vs. 8% (3/40); ovary 25% (10/40) vs. 73% (29/40); retrocervical area (0/40) vs. 60% (24/40), rectosigmoid 5% (2/40) vs. 78% (31/40), respectively. Specific endometriotic lesions recognized by TVUS versus ETVUS, were: ovarian endometriomas in 25% (10/40) vs. 45% (18/40), adhesions leading to distorted anatomy in 3% (1/40) vs. 78% (31/40); endometriotic implants or plaques in 3% (1/40) vs. 70% (28/40); and endometriotic nodules in 3% (1/40) vs. 35% (14/40), respectively. Routine TVUS diagnosis relied on the presence or absence of endometrioma (10/10), whereas ETVUS showed additional sites of disease in 97% (30/31) patients.

Conclusions:
Expert guided transvaginal ultrasound is more sensitive than routine transvaginal ultrasound to diagnose endometriosis, identifying lesions other than endometrioma, and is of assistance in surgical planning and patient counseling. Our future goal is to develop a simplified ETVUS technique for routine use.