

PREDICTING ENDOMETRIOSIS WITH TRANSVAGINAL ULTRASOUND

Rachel Wilkins, Sonographer at Cambridge University Hospital Trust



Background

Endometriosis affects 30-50% of the symptomatic female population (2). Chronic pelvic pain can significantly reduce quality of life and there is also a strong association with infertility. The benefits of early diagnosis of the disease are well recognised, however endometriosis is difficult to diagnose and some studies suggest that over 30% of women with endometriosis have been symptomatic for at least six years before confirmation of the disease is made (6).

Laparoscopy is considered the gold standard in identifying endometriosis (3). However, laparoscopy is costly and invasive (1). Transvaginal Ultrasound (TVUS) is readily available and relatively cheap in comparison to imaging modalities such as Magnetic Resonance Imaging (MRI). Ovarian endometriomas are the most common feature of endometriosis identified on TVUS. However, identifying additional features associated with endometriosis can improve prediction and with adequate training diagnostic accuracy with TVUS can be achieved (6).

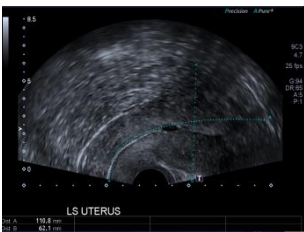


Fig 1: Normal torus uterinus appears as a bright line of fat behind the cervix/uterus junction



Fig 2: Recto-sigmoid endometriotic deposit



Fig 3: Adhesions causing abnormal uterine shape in a patient with endometriosis



Fig 4: endometriotic nodule arising from the posterior bladder wall.



Fig 5: Image indicates most common sites for endometriosis to occur

Ultrasound features of endometriosis:

- 1) Endometriotic deposits/nodules
 - Lesions with irregular margins (4) that can be hypoechoic (figure 2) or hyperechoic (figure 4)
 - These deposits are most commonly identified in the anatomical locations on figure 5
 - It is particularly important to assess the torus uterinus (figure 1) and the posterior uterine bladder wall (figure 4)
- 2) Mobility
 - Fixation of at least one ovary to the uterus is highly suggestive of adhesions secondary to endometriosis (5)
 - Ovaries located in the Pouch of Douglas can be a 'soft marker' for endometriosis (8)
- 3) Shape of the uterus
 - Adhesions can cause abnormal "kink" of the uterus
- 4) "Sliding sign"
 - In this technique the practitioner determines whether the rectosigmoid bowel and posterior uterus glide smoothly. The "sliding sign" can also be used to assess the cervix and anterior rectum
- 5) Ovarian Endometriomas
 - The most commonly visualised indicator of endometriosis.
 - They most commonly present as a unilocular cyst with homogeneous ground glass echogenicity of the cyst fluid

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