Ureteric Endometriosis: detection and assessment of level of obstruction at sonovaginography for deeply infiltrating endometriosis

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**Design:** Retrospective case series

**Setting:** Specialist Obstetric and gynaecology ultrasound practice

**Inclusion:** All cases where ureteric obstruction was detected at sonovaginography (SVG) between September 2015 and June 2018

**Results:** 197 patients had tracing of ureters at SVG for Deeply Infiltrating Endometriosis (DIE). In 87% of patients (n=171), both ureters were traced along the lateral pelvic wall up to the level of division of the common iliac artery. In another 3% (n=6), at least 1 ureter could be traced to the same level. In 100% of patients, ureters could be traced to varying levels of their pelvic course. Four patients were identified to have ureteric obstruction and the level of obstruction was assessed. The findings were confirmed at the time of laparoscopic surgery with histology.

**Conclusion:** The ureters can be traced from the bladder up to the level of the division of the common iliac vessels, at the time of sonovaginography, to detect the presence of ureteric endometriosis and to assess the level of obstruction. Pre-operative detection of ureteric endometriosis is helpful in planning the surgical approach. Such patients should be managed in the multidisciplinary setting with input from a Urologist.

- Age ranged from 34 to 52 years
- 2/4 patients were nulliparous and 2/4 were para 1 with a history of subfertility
- 2 nulliparous patients were known to have endometriosis treated previously, 1 with severe disease and the other with mild disease
- The other 2/4 patients had no history of symptoms typical of endometriosis - 1 patient was undergoing investigation of hypertension and the other patient underwent a routine pelvic scan for a single episode of moderate pelvic pain of 5 days duration
- In all 4 patients, the left ureter was affected
- All lesions were hypoechoic, avascular nodules with irregular borders

**Levels of ureteric obstruction were as follows:**
- near the vaginal fornice close to a vaginal nodule
- at the level of the uterine artery
- at uterosacral ligament (USL) insertion close to the uterine artery
- lateral pelvic side wall at a distance of 9 cm from vesico-ureteric junction

All 4 patients had other sites of severe DIE
All had bowel endometriosis detected at the assessment of DIE
- 2 had rectal/rectosigmoid nodules
- 2 had sigmoid nodules

All 4 had left uterosacral ligament DIE
3 of 4 patients had vaginal nodules

• Video clip of tracing of the ureters