

Ultrasound monitoring of female genital tuberculosis with bilateral tubo-ovarian abscess but unaffected endometrial cavity

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CASE

Case of a 28-year-old G1P1 (1001) with a history of pulmonary tuberculosis (TB) presented with chronic pelvic pain.

Ultrasound showed tubo-ovarian abscess on the right adnexa, 5.25 x 3.84 x 5.44 cm in size and tubo-ovarian complex on the left adnexa, 5.93 x 3.84 x 5.44 cm in size. Endometrium measures 14.6mm, uniform homogeneous, hyperechoic, linear midline echo, with regular endo-myometrial junction, Color score=I, no flow.

Endometrial biopsy was negative for tuberculosis, but histopathology of the tuboovarian complex confirmed chronic granulomatous inflammation with necrosis. MTB DNA of pelvic fluid was positive.

OUTCOMES

Patient underwent Exploratory Laparotomy Biopsy of Pelvic Implants under Spinal Anesthesia. Patient is being treated with anti-TB therapy for 12 months, with monthly ultrasound monitoring for disease progression. Latest transvaginal ultrasound showed elongated, thick-walled structures with low level echoes, to consider pyosalpinges measuring as follows: medial to the right ovary measuring 1.8x 2.2x 1.3cm and lateral to the left ovary measuring 2.7x 2.4x 1.7cm.

ULTRASOUND MONITORING

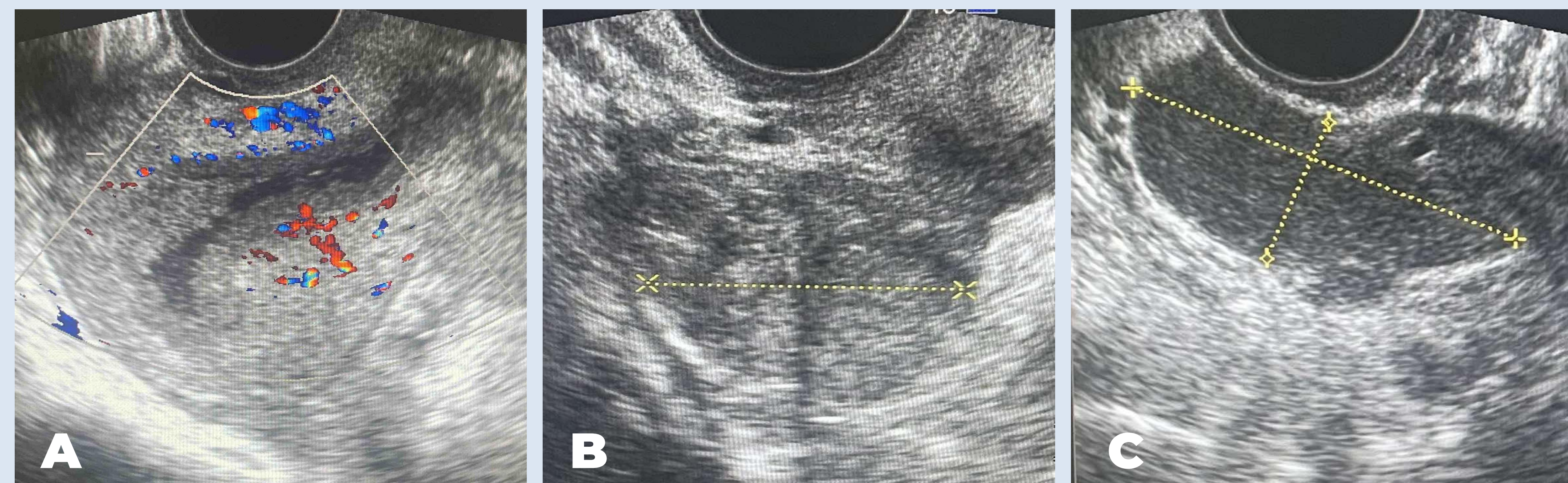


Figure 1. Preoperative findings. (A) Retroverted uterus with irregular and thickened endometrium (14.6 mm), containing hypoechoic fluid and echogenic sediments. (B) Right ovary and (C) Left ovary, each with an adherent hypoechoic tubular mass (right: 5.25 x 3.84 x 5.44 cm; left: 5.93 x 3.84 x 5.44 cm) are highly suggestive of bilateral salpingitis.

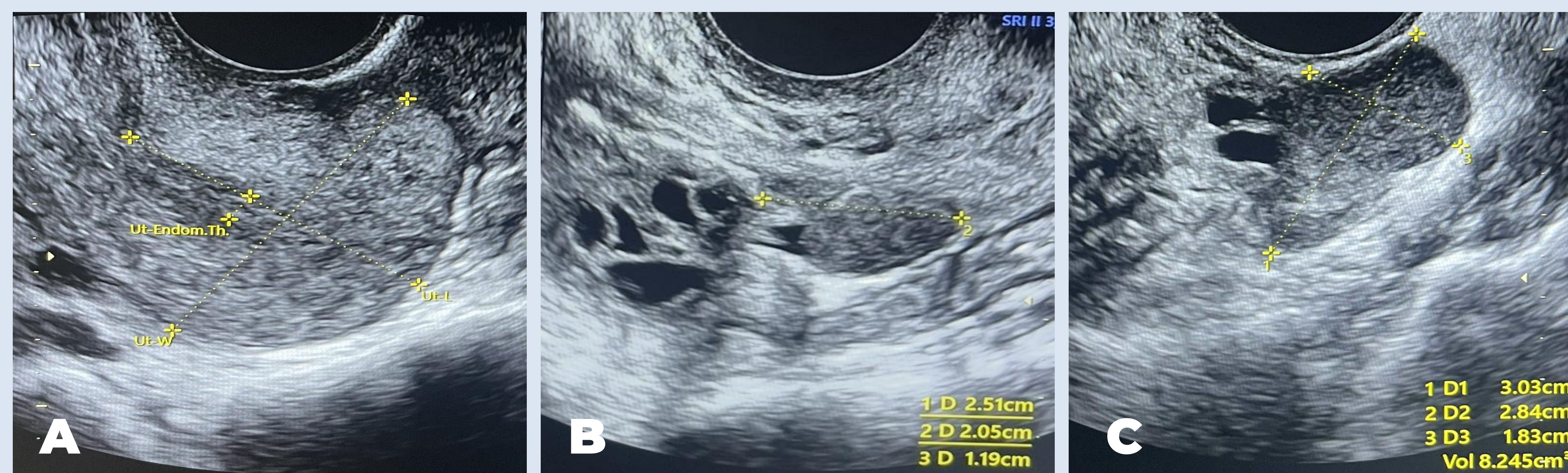


Figure 2. Post-operative findings. (A) Retroverted uterus with a thin endometrium (4.2 mm) and features of mild adenomyosis. (B) Right ovary and (C) Left ovary, both normal in size and echotexture with pelvic adhesions. Significantly smaller tubulocystic masses (right: 1.8x 2.2x 1.3cm, left: 2.7x 2.4x 1.7cm).

DISCUSSION

Genital TB affects the fallopian tube in 90-100% of the cases and rarely does it not involve the endometrium which commonly affects 50-70% of the cases (Sharma et al., 2018). The abundant blood supply and extensive lymphatic drainage of the fallopian tubes make it highly susceptible to tuberculosis, while the limited blood supply, restricted lymphatic drainage, and cyclical shedding of the endometrium offer protection against persistent TB infection (Jones & Lukies, 2018).

CONCLUSION

Transvaginal ultrasound aids in the diagnosis of pelvic inflammatory disease (PID) with 81%-100% specificity and 78%-100% sensitivity (Sharma et al., 2021). Genital TB may present with sonographic findings similar to PID, including tubo-ovarian masses, adnexal adhesions, endometrial fluid collection, calcifications, and synechiae. Transvaginal ultrasound is also essential for monitoring disease progression, as persistent masses or newly affected gynecologic structures may indicate treatment failure.