



Hysteroscopic view of uterine tuberculosis after menopause: case report and literature review

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ePoster

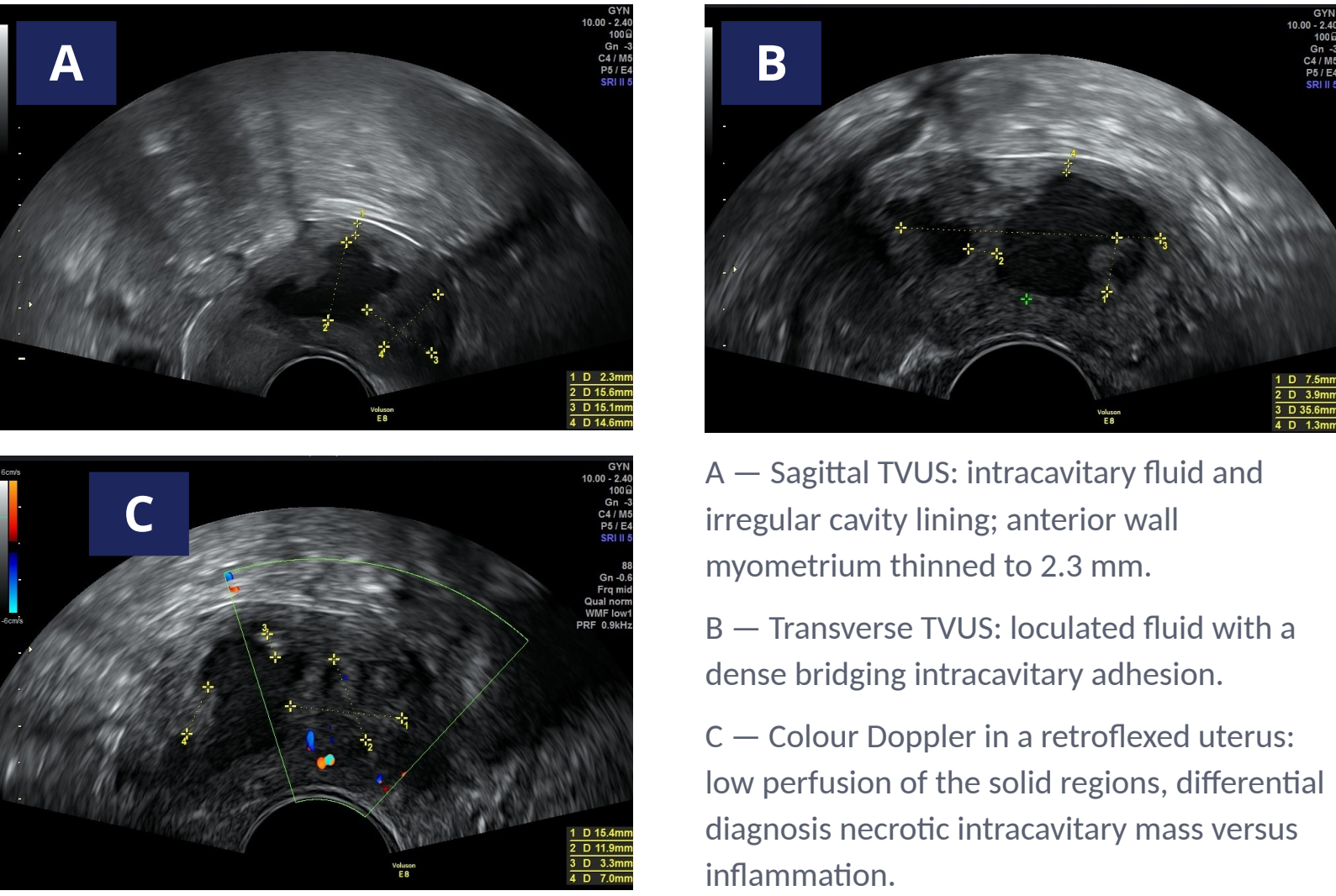
BACKGROUND & OBJECTIVES

Female genital tuberculosis (FGTB) is exceptionally rare in low-incidence regions. In high-burden populations, especially in South Asia and Africa, oligosymptomatic FGTB is often detected during infertility work-up. Hysteroscopic documentation is scarce and postmenopausal presentations are limited to a few case reports.

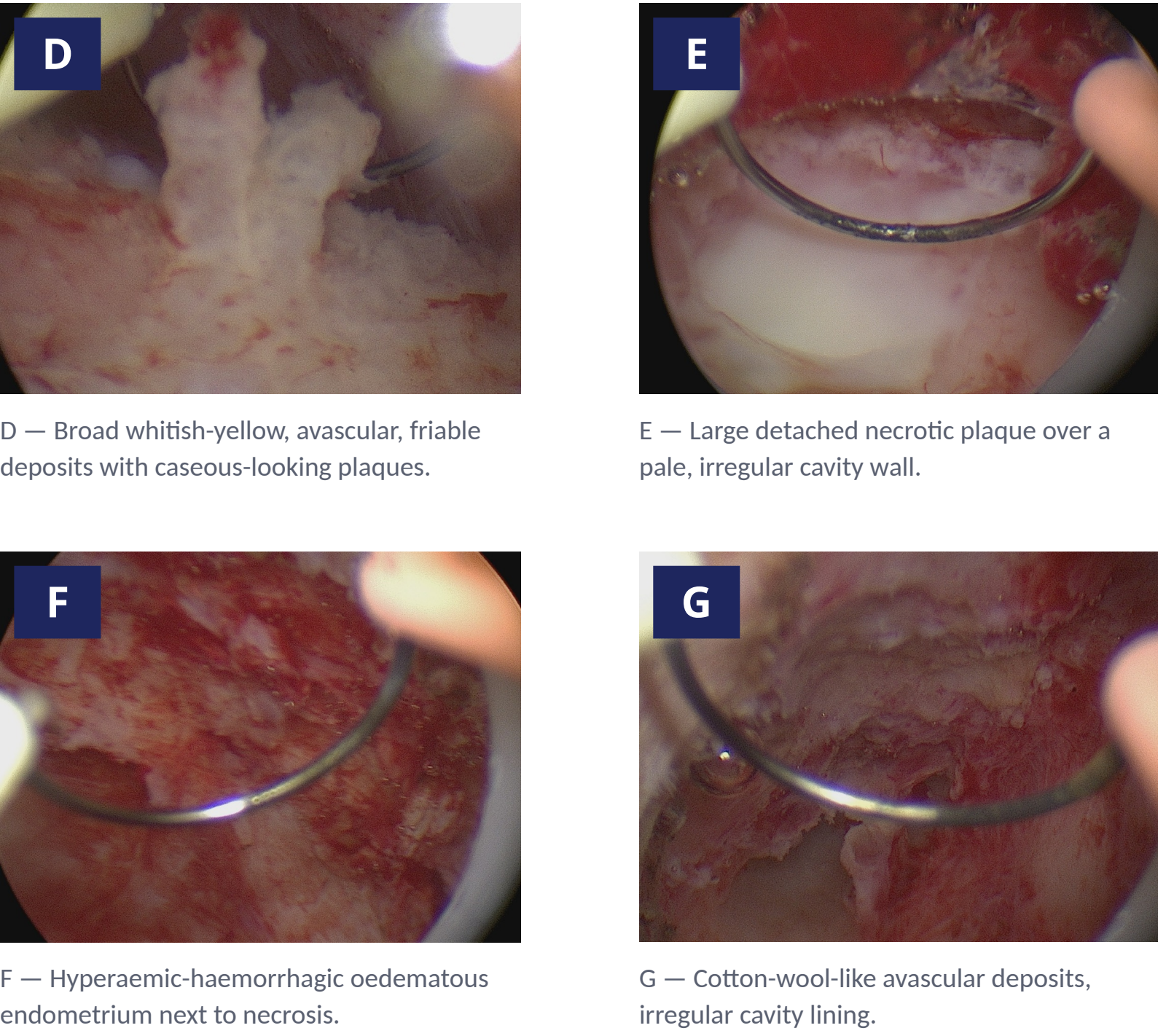
RESULTS — CASE PRESENTATION

- 66-year-old postmenopausal woman, G0P0, referred for hysteroscopy after a suspicious transvaginal ultrasound (TVUS) finding
- TVUS was requested by the patient at a routine check-up although it is not part of routine screening in Germany; the only complaint was a nonspecific pelvic sensation
- No postmenopausal bleeding, discharge, cough, fever or weight loss
- No travel to high-prevalence regions, but occupational contact with people from high-incidence countries
- TVUS: serometra/pyometra with intracavitary material in a distorted, irregularly lined cavity; myometrium thinned to 2.3 mm. Absent perfusion in the solid regions argued against malignancy
- CA-125 was 54 U/ml and CRP 8 mg/l
- Preoperative diagnosis: intrauterine necrosis of unclear origin

PREOPERATIVE ULTRASOUND



HYSTEROSCOPIC FINDINGS

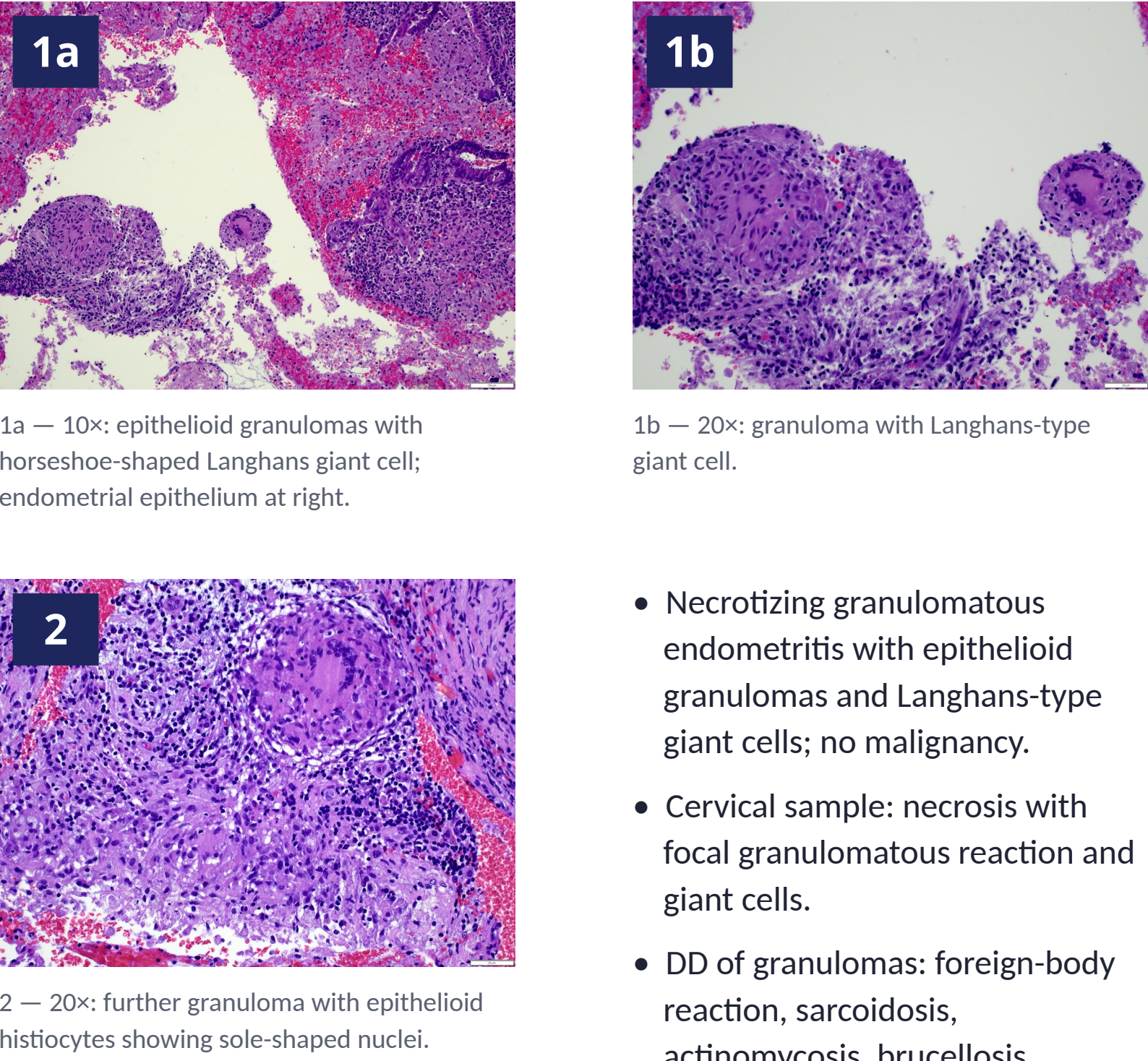


- Pus drains after cervical dilatation
- Turbid fluid, irregular cavity wall, partly pale and partly hyperaemic-haemorrhagic endometrium
- Whitish-yellow avascular friable deposits with large caseous-looking and smaller cotton-wool-like, partly detached plaques
- The pattern is suggestive of tuberculosis, although no singular pathognomonic hysteroscopic sign exists

EPIDEMIOLOGICAL CONTEXT

- Germany is a low-incidence country: 4,391 notified cases in 2024 (5.2/100,000), 4,070 provisional cases in 2025 (RKI/DZK); globally 10.7 million cases and 1.23 million deaths in 2024 (WHO).
- Reactivation, migration and unrecognized contact chains keep FGTB on the differential list even in low-incidence settings.

HISTOPATHOLOGY



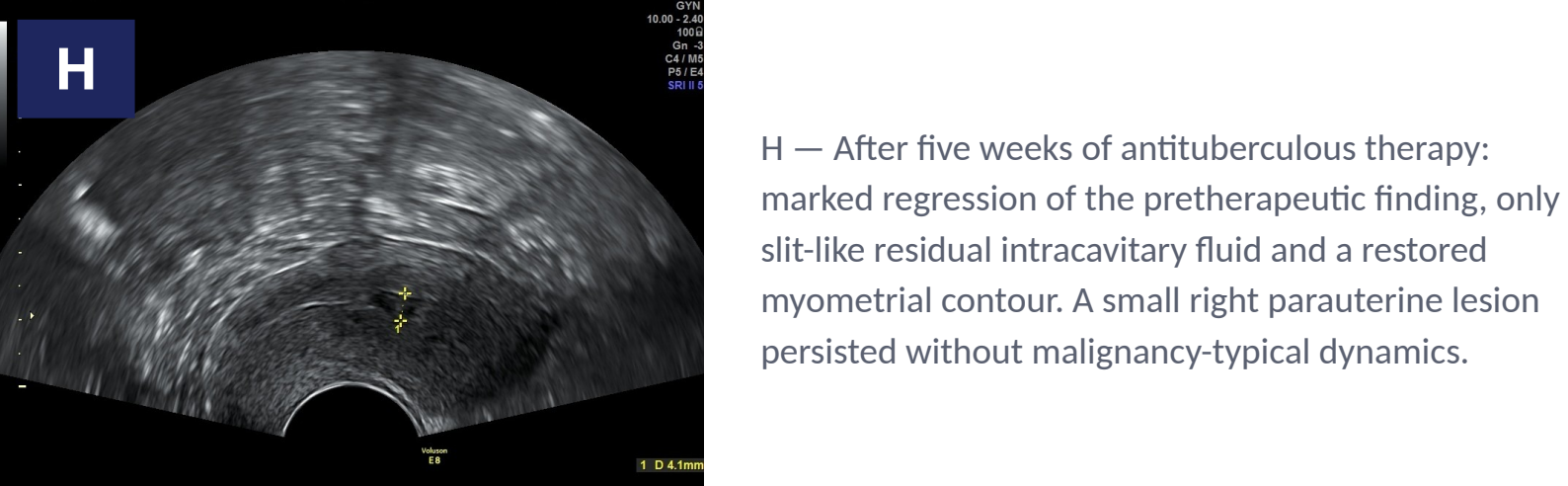
- Necrotizing granulomatous endometritis with epithelioid granulomas and Langhans-type giant cells; no malignancy.
- Cervical sample: necrosis with focal granulomatous reaction and giant cells.
- DD of granulomas: foreign-body reaction, sarcoidosis, actinomycosis, brucellosis, Crohn's disease, schistosomiasis.

MICROBIOLOGICAL CONFIRMATION

Test	Result / interpretation
IGRA (QuantiFERON)	Positive
Xpert MTB/RIF Ultra	Weakly positive: MTB complex DNA, low bacillary load
Xpert MTB/XDR	Positive; no resistance reported
IS6110 qPCR	Positive: independent MTB complex DNA detection
Ureaplasma, N. gonorrhoeae, C. trachomatis, T. vaginalis, Mycoplasma spp., HIV	All negative
Diagnosis	Histology + IGRA + three molecular assays = endometrial FGTB confirmed

COURSE, THERAPY AND FOLLOW-UP

- Chest radiograph and CT: post-tuberculous upper-lobe changes, bronchiectasis and calcified nodes; no cavity and no active pulmonary tuberculosis.
- Quadruple antituberculous therapy started; short interruption for gastrointestinal intolerance, then stepwise resumption of the full regimen.



DIAGNOSTIC TIMELINE

Step	Event
Routine check-up	Patient requests TVUS despite absence of symptoms
Preoperative	Serometra/pyometra, irregular cavity, myometrium 2.3 mm, CA-125 54 U/ml
Hysteroscopy	Pus, pyonecrotic cavity, extensive necrosis
Histology	Necrotizing granulomatous endometritis, Langhans giant cells, no malignancy
+2 to +4 weeks	IGRA positive; repeat biopsy: Xpert Ultra, Xpert XDR and IS6110 qPCR positive
+7 weeks	Chest imaging: post-tuberculous changes only; quadruple therapy started
+5 weeks of therapy	TVUS: slit-like residual fluid, myometrium restored

EXPOSURE RISK IN THEATRE

- Relevant transmission originates mainly from infectious pulmonary or laryngeal tuberculosis; isolated extrapulmonary tuberculosis usually carries no transmission risk, except for aerosol-generating manipulation of bacillary material
- The risk depends on duration and intensity of contact and on bacillary shedding: a close contact is assumed after at least 8 cumulative hours in closed rooms with a smear-positive index case, or at least 40 hours with culture- or PCR-only detection (Diel et al. 2023)
- Intense single contacts without protection and exposure of highly susceptible persons are assessed individually (RKI guidance)

LITERATURE REVIEW

- Hysteroscopic documentation of FGTB comes almost exclusively from infertility work-up in high-burden settings; postmenopausal disease is confined to isolated reports (Prado 2019, Errarhay 2013)
- Recurrent patterns are pale, thin, irregular endometrium, whitish-yellow caseous deposits around the tubal ostia, cotton-wool-like plaques, the methylene-blue “starry sky”, impregnated “cobwebs”, gland atrophy, shrunken or distorted cavity and adhesions of all ESH grades (Sharma 2009, 2022; Kumar 2004–2014); none of them is pathognomonic

Study	Population	Key hysteroscopic findings
Sharma et al. 2022, Indian J Tuberc	348 FGTB cases, prospective	Pale endometrium 54.3%, normal cavity 28.2%, adhesions 29.9%, gland atrophy 12.4%, shrunken 6.3% or distorted cavity 5.2%, obstructed ostia 28.7%
Sharma et al. 2011, J Minim Invasive Gynecol	99 FGTB vs 289 controls	Difficulties or complications 31.3% vs 3.8%; perforation 8.1% vs 1.7%
Mondal et al. 2024, BJOG	16,784 subfertile women, 309 with FGTB	Predictors mainly laparoscopic; hysteroscopy contributed adhesions and micropolyps
Kumar & Kumar 2004, 2007, 2014	Single-case image reports	Whitish periostial deposits with thin, pale, dirty-looking endometrium; “starry sky” after methylene blue; impregnated cobweb adhesions
Prado 2019; Errarhay 2013 (case reports)	54 and 74 years, postmenopausal; ascites, pyorrhoea, carcinoma suspected	Cotton-like formations over the entire endometrium and both ostia; whitish irregular endometrium; normal cavity after therapy

DIAGNOSTIC PITFALLS

Mimicked entity	Overlapping features	Consequence
Endometrial carcinoma	Bleeding, endometrial thickening, pyometra, necrosis	Parallel work-up for malignancy and tuberculosis
Ovarian cancer / carcinomatosis	Ascites, elevated CA-125, peritoneal findings	Histology before radical surgery where acceptable
PID / tubo-ovarian abscess	Adnexal mass, pain, mild or unspecific CRP rise	STI/PID testing combined with tuberculosis testing
Asherman syndrome / chronic endometritis	Adhesions, micropolyps, hyperaemia, fibrotic cavity	No pathognomonic hysteroscopic sign despite “starry sky” or “cobwebs”
Healed, undiagnosed pulmonary tuberculosis	Old scars, calcified nodes, no symptoms	Systemic search and infectious-disease input; the patient is not automatically infectious

CLINICAL LESSONS

- Necrotic intracavitary material without tumour vascularization should raise suspicion of granulomatous disease
- Langhans-type giant cells in the histologic specimen: red flag
- Specimens should be sent for mycobacterial testing whenever necrosis or granulomas are seen: culture, PCR and Xpert confirm the diagnosis
- Most likely route here: reactivation of an earlier, possibly unnoticed infection with haematogenous spread to the endometrium (Kaur 2025); the patient had frequent occupational contact with migrants from high-incidence countries in a charitable institution. An orogenital route is conceivable but only anecdotally documented (Kimura 2018: transmission from spousal epididymal tuberculosis, isolates identical on whole-genome sequencing; M. tuberculosis has been recovered from semen in male urogenital tuberculosis)
- Cave: molecular confirmation followed about one month after the index hysteroscopy; the recommended work-up was initially not pursued in primary care because the finding was regarded as “gynaecological”
- Extrapulmonary tuberculosis requires a defined pathway with infectious-disease referral, systemic imaging and contact assessment

CONCLUSIONS

- FGTB can occur beyond high-risk regions, high-risk populations and the reproductive phase
- In postmenopausal patients it may be oligosymptomatic and may mimic genital malignancy
- Hysteroscopic FGTB patterns are rarely seen in routine practice, but if correctly identified they may direct the diagnosis, together with histology (granulomas with Langhans-type giant cells) and mycobacterial testing

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