

CASE REPORT

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# Female genital tuberculosis and infertility: serial cases report in Bandung, Indonesia and literature review

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## Abstract

**Background:** Female genital tuberculosis (FGTB) is a *Mycobacterium* infection in the reproductive organs which often leads to infertility. FGTB is either asymptomatic or causes uncharacteristic clinical presentations, making an early diagnosis is challenging. Our aims were to evaluate the clinical presentations, the process to confirm the diagnosis and followed-up the patients who had undergone laparoscopy at our center. FGTB has been reported from many countries, but has never been reported from Indonesia. Here we present case studies to document the presence of FGTB in Indonesia.

**Cases presentation:** There were three patients admitted to our center; two patients were admitted with irregular menstrual cycle as their chief complaint, while one patient came due to infertility. The results from laparoscopy were suggestive of FGTB including the presence of caseating granulomas surrounded by epithelioid cells, lymphocytes, plasma cells, and Langhans giant cells. Additionally, PCR testing confirmed presence of MTB. Subsequent to diagnosis, continuous TB medications was administered with excellent clinical outcome in two patients (pregnant in 18 months after under gone laparoscopy). The infertile patient remain in one of the treated patient above.

**Conclusion:** In infertile patients who live in countries where Tuberculosis is an endemic disease, such as Indonesia, a comprehensive history taking, along with ultrasonography results can be used to diagnose FGTB. Confirmation of this diagnosis can be achieved through polymerase chain reactions result. Timely diagnosis and treatment are imperative to prevent any permanent injury to patient's reproductive organs.

**Keywords:** Serial cases report, Female genital tuberculosis, Infertility, Laparoscopy, Histopathology examination, Polymerase chain reaction

## Background

Tuberculosis (TB) is a disease caused by *Mycobacterium* TB. In spite of major improvements in antibiotic regimens and vaccination, TB remains as a major global health problem. Based on WHO's high burden country list for TB, Indonesia is ranked 2nd after India as a country with the highest prevalence of TB [1]. Most commonly, TB infects the lungs (pulmonary TB). However, extrapulmonary manifestation of TB is an increasingly common feature [2]. In female patients, one of the most

common site of extrapulmonary TB is the reproductive organs, termed genital TB [3]. Clinically, female genital tuberculosis (FGTB) is usually presented with chronic pelvic inflammatory disease, menstrual abnormalities and infertility [4]. The actual number of FGTB incidences cannot be estimated accurately, as it is often asymptomatic and only 50% of cases are diagnosed without surgery [5–7]. This study was aims to evaluate the clinical presentations, the roles of surgery, histopathology examination and polymerase chain reaction (PCR) assay in three FGTB cases treated at the Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Padjadjaran (FK UNPAD)—Dr. Hasan Sadikin, Hospital (RSHS), Bandung.

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