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## Case Report

# Intraperitoneal tuberculosis abscess: A rare form of tuberculosis <sup>☆</sup>

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## ABSTRACT

Tuberculosis is related to high rate of morbidity and mortality worldwide. Extra-pulmonary forms are increasing in incidence. The diagnosis of extrapulmonary locations, especially abdominal, is often difficult because the clinical and biological signs are not specific, leading to a delay in diagnosis and treatment. The intraperitoneal tuberculosis abscess is a particular radio-clinical entity, due to its atypical and confusing symptomatology. We report the case of a 36-year-old female patient who had a peritoneal tuberculosis abscess manifested by diffuse abdominal pain in a febrile context.

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## Introduction

Tuberculosis is a major public health problem in Morocco. Extrapulmonary tuberculosis accounts for almost one-third of cases. Abdominal tuberculosis can affect all organs and have atypical clinical and radiological aspects. The intraperitoneal tuberculosis abscess is a rare form that can lead wrongly to malignant pathology. This diagnosis, difficult and frequently misunderstood, should be discussed when there is an epidemiological context, concomitant pulmonary involvement,

or a history of tuberculosis. The imaging is of great contribution for the positive diagnosis, especially in case of other concomitant involvement including lung or lymph node [1,2].

## Case report

A 36-year-old woman with a history of close contact tuberculosis, presented to the emergency department for diffuse acute abdominal pain with fever, night sweats and weight loss.

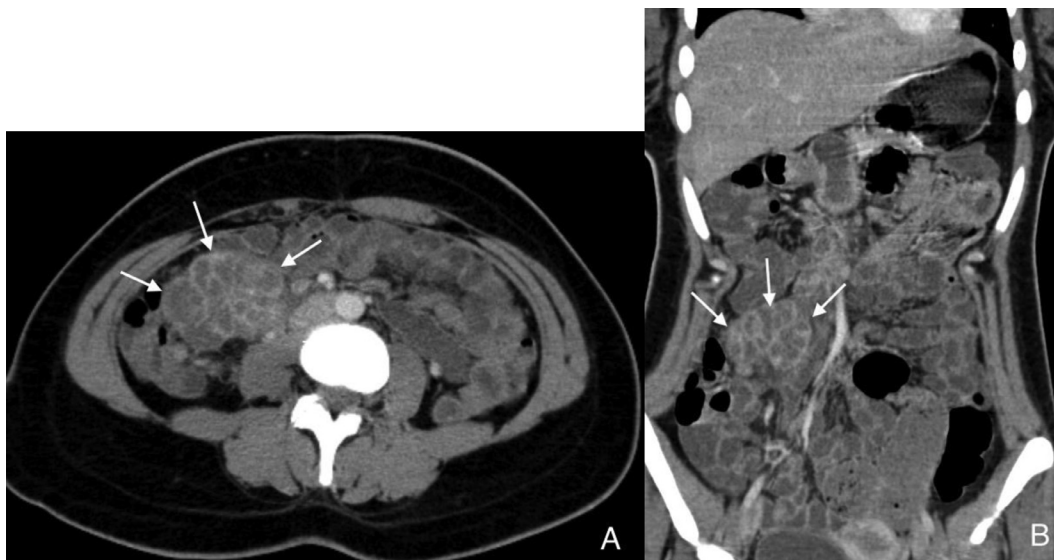
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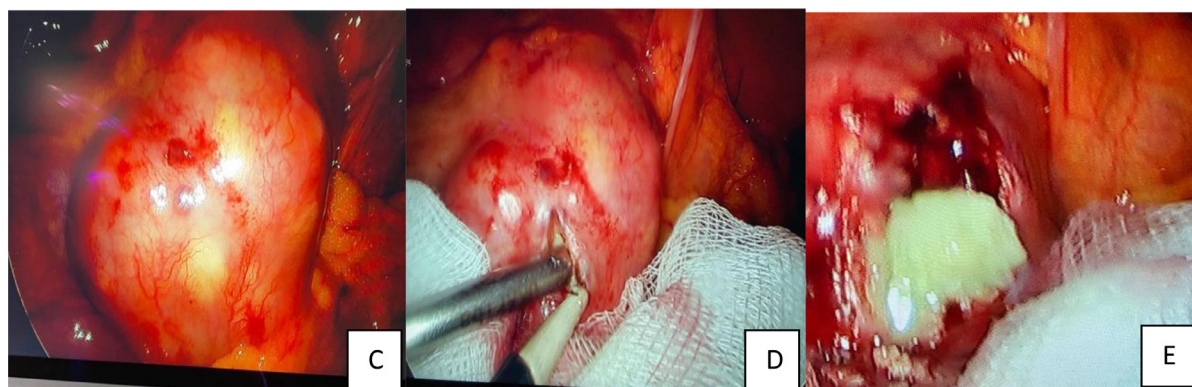
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**Fig. 1 – Abdominal scan CT in axial (A) and coronal (B) reconstruction showing intraperitoneal tuberculous abscess localized in the right iliac cavity, hypodense containing septas with thickened with contrast enhancement.**



**Fig. 2. – (C) Exploration of the abdominal cavity showing a peritoneal mass. (D) Incision and opening of the mass. (E) macroscopic appearance of the intraperitoneal tuberculous abscess.**

There were no respiratory symptoms. The clinical examination found a bad general appearance, with fever at 38.4°C, diffuse abdominal sensitivity and a defense at the right iliac fossa. Laboratory data showed anemia at 10 g/dL, microcytic hypochromia, leukocytosis of 15,500 cells/mm, a high sedimentation rate at 45 mm and a c-reactive protein 185 mg/L. The abdominal ultrasound showed hypoechoic mesenteric mass, well limited, without ascites or other associated lesion. An abdominal CT scan was performed, it showed a right mesenteric hypodense multilocular lesion, with peripheral and bulkhead contrast enhancement, without digestive communication or ascites. It was associated to adjacent millimetric necrotic ganglia (Fig. 1).

The diagnostic of tuberculosis abscess was suggested. An exploratory laparoscopy was performed which confirmed the peritoneal abscess (Fig. 2). A surgical drainage of the abscess was realized. The histo-bacteriological study confirmed the tubercular origin. The patient received medical treatment against tuberculosis with good clinical evolution.

## Discussion

Tuberculosis remains a topical endemic infection due to *Mycobacterium tuberculosis* that causes a public health problem especially in developing countries [1,2]. Peritoneal localization is a relatively common extrapulmonary form, accounting for 1%-6% of extrapulmonary tuberculosis and about 50% of abdominal localizations [2,3]. The intraperitoneal tuberculosis abscess is a very rare form. This can occur through intestinal or genital contamination, but can also be secondary to a ruptured lymph node. Symptomatology is generally not very specific, resulting in abdominal pain, transit disorders, weight loss, fever, and the presence of an abdominal mass at palpation, and can lead wrongly to malignant pathology, especially in a context of alteration of the general state [4].

There is no specific biological marker of this pathology and bacteriological samples are often negative and cause diag-

nostic delay. Imaging can help diagnosis, especially when it highlights another co-location of tuberculosis. The radiological signs are not specific but the association of ascites, adhesions, granulations and peritoneal thickening is strongly suggestive of the tuberculous origin. Isolated tuberculous abscess may mimic a pseudotumoral appearance [3,5,6].

Abdominal ultrasound may show a limited hypoechoic or anechoic collection, sometimes containing intense echoes or partitions. The abdominal CT scans shows a mesenteric mass thickened wall, of heterogeneous density, which contains septas with central hypodense areas of necrosis. The CT scan can also search other locations of tuberculosis [2,7,8].

Exploratory coelioscopy with biopsy allows access to the abscess, identifies its nature and look for associated macroscopic aspects suggestive of tuberculosis. Biopsies with histobacteriological study remains the only guarantee of the diagnosis of certainty. remains is an effective technique for histological confirmation [1,4,5]. Surgical treatment based on the drainage of the abscess, coupled with medical treatment against tuberculosis is the only guarantee of cure and has the advantage of reducing the risk of tuberculosis recurrence [7,8].

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## Conclusion

Abdominal tuberculosis is characterized by a clinical and radiological polymorphism. It is therefore necessary to evoke the diagnosis of tuberculosis in front of what seems to be, at the clinical examination or imaging, an abdominal mass, in order to be able, thus, to start a rapid and adapted medical and/or surgical treatment.

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## Patient consent

Written, informed consent for publication of their case was obtained from the patient.

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