



Protein-Rich Ascites Revealing Pseudotumor Peritoneal Tuberculosis: A Case Report

Dounia Rajih^{1*}, Hajar El Marmouk¹, Hala Aouroud¹, Adil Ait Errami¹, Sofia Oubaha², Zouhour Samlani¹, Khadija Krati¹

¹Gastroenterology Department, Mohammed VI University Hospital, Marrakech

²Physiology Department, Faculty of Medicine and Pharmacy at Cadi Ayyad University, Marrakech

***Corresponding Author**
Dounia Rajih

Article History
Received: 02.09.2021
Accepted: 11.10.2021
Published: 25.10.2021

Abstract: Tuberculosis remains a frequent pathology in Africa and particularly in Morocco despite diagnostic and therapeutic progress. Peritoneal localization represents the most frequent form of intra-abdominal localization and is the second cause of exudative ascites after peritoneal carcinosis. The aim of our study is to determine the epidemiological and clinical aspects, and to evaluate the diagnostic and therapeutic difficulties.

Keywords: Protein-Rich, Pseudotumor, Peritoneal Tuberculosis.

Copyright © 2021 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

Tuberculosis is a major public health problem in Morocco and in the world. Extrapulmonary tuberculosis accounts for nearly one third of reported cases of tuberculosis in Morocco [1]. Abdominal localization is relatively common and accounts for 5-10% of all localizations [2]. Abdominal tuberculosis can affect all organs and have atypical aspects both clinically and radiologically [3].

The pseudotumor form is a particular form, rare, which can erroneously point to malignant tumor pathology, especially since the symptomatology evolves in a context of altered general condition. This diagnosis is difficult and often unrecognized. It should be evoked in the presence of a suggestive epidemiological context [3], concomitant pulmonary involvement, or a history of tuberculosis. Imaging is of great help in the positive diagnosis, mainly thanks to radioguided samples [4]. Once histological evidence is obtained, antibacillary treatment is often effective with a spectacular clinical and radiological evolution [5].

We report a retrospective study of 1 case of abdominal pseudotumor tuberculosis in an immunocompetent patient, collected in the department of gastroenterology at the Mohammed VI University Hospital of Marrakech, while highlighting the epidemiological and clinical particularities of this association as well as the difficulties of diagnosis and therapeutic management.

OBSERVATION

The patient was 31 years old, multiparous, with no notable pathological history, admitted for abdominal distension associated with chronic liquid diarrhoea at the rate of 3-4 stools per day without mucus or blood, all of which had been evolving for 6 months in a context of feverish sensation and profound general deterioration.

Clinical examination showed a cachectic patient. Her vital parameters were normal and she was not febrile. Her abdomen is distended with diffuse pain, particularly in the right and left iliac fossae, and on percussion there is a diffuse dullness.

Citation: Dounia Rajih *et al* (2021). Protein-Rich Ascites Revealing Pseudotumor Peritoneal Tuberculosis: A Case Report. *Glob Acad J Med Sci*; Vol-3, Iss-5 pp- 170-173.

A puncture of ascites fluid was performed which showed a protid-rich ascites: macroscopic appearance, hematic, total protein: 63.5g/l, Leukocytes: 2560 /mm³, PNN: 768, mononuclear cells: 2560élm/mm³, the search for malignant cells: negative, ADA in fluid Ascite: 30UI/l and Absence of acid-fast bacilli. The CA125 level was high (1766 IU/l) and the sputum was negative for BK.

Chest X-ray came back noramle, Abdominal-pelvic ultrasonography revealed ascites of great abundance partitioned, uterus of normal size and left ovary is increased in size and non-vascularized.

The thoracic-abdominal-pelvic CT scan showed:On the thoracic level, presence of sub-

centimetric lymph nodes visible in Baret's lodge, FAP. Absence of pleuropericardial effusion. At the abdomino-pelvic level, the right ovary was normal in appearance, normo vascularized on color Doppler, measuring 3.23 x 1.41 cm, the left ovary was swollen compared to the contralateral ovary, measuring 4.12 x 2. The left ovary was swollen compared with the contralateral ovary, measuring 4.12 x 2.52 cm, with two multipartitioned cystic formations (thin partitions), not vascularized on colour Doppler and without any detectable endocystic vegetations, no deep adenopathy and presence of a large peritoneal effusion visible in Morisson's space, perihepatically at the level of the two parietal-colonic gutters, and at the pelvic level.

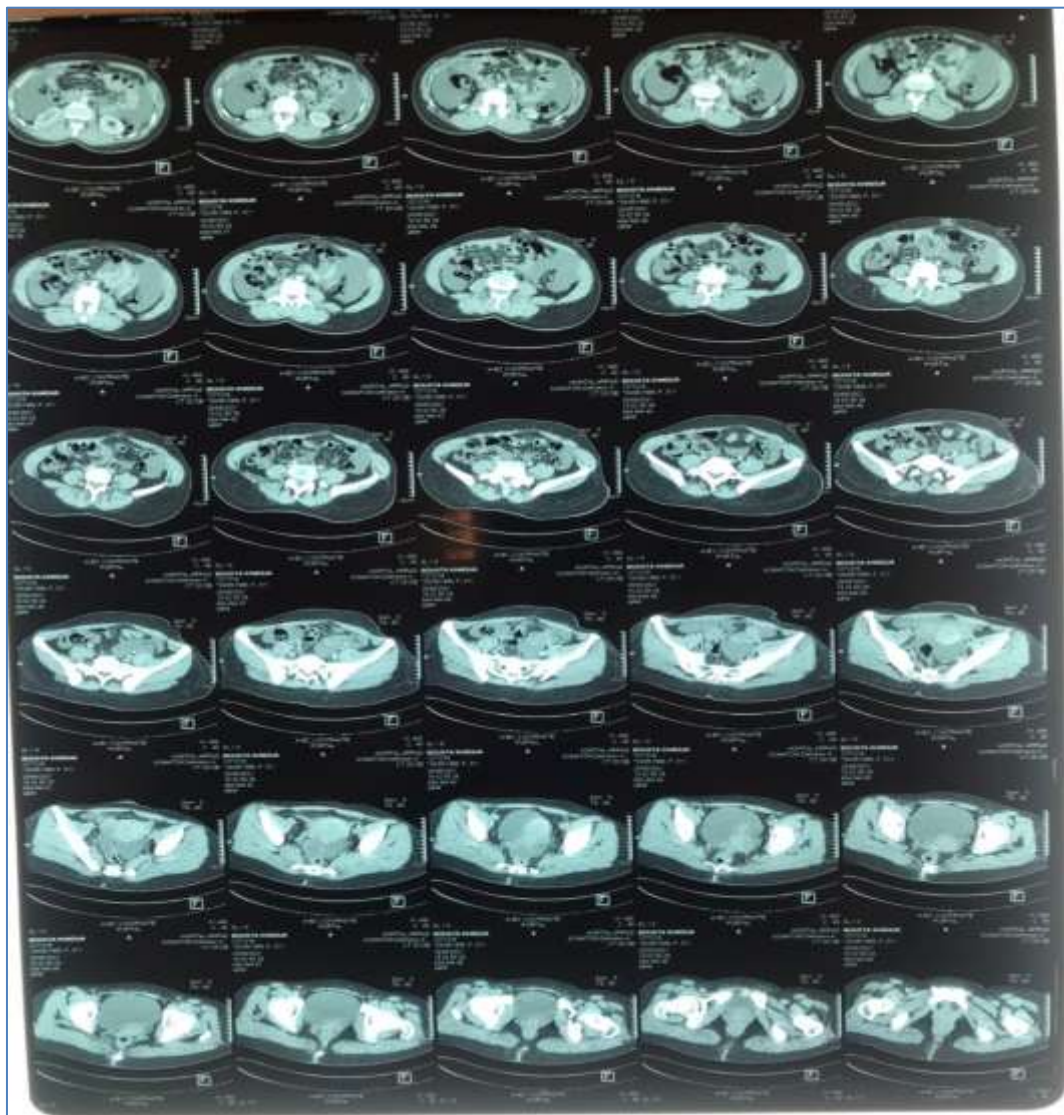


Fig-1: CT scan of the left ovary swollen in relation to the contralateral ovary, with two multipartitioned cystic formations (thin partitions), non-vascularized and without detectable endocystic vegetations and presence of a large peritoneal effusion

The decision of exploratory laparotomy was taken during which the exploration objectified the presence of umbilical hernia with uncomplicated epiploic content, multiple pelvic and abdominal adhesions with epiplo-parietal granulations and the adnexa are covered with granulations, a liberation of adhesions was carried out with sampling of the peritoneal liquid, multiple biopsies are taken and sent in pathology and bacteriology.

Cytological examination of the two slides after staining with papanicola or shows on a hemorrhagic and inflammatory background made of lymphocytes, plasma cells, neutrophil polynuclear cells and macrophages, the presence of a few clusters of dystrophic mesothelial cells without notable cytonuclear atypia. A fibro-fatty fragment weighing 1.2g and measuring 2.5x2x0.5cm was found. It is brownish beige in colour and has a firm consistency. It was included in its entirety. Microscopy: On histological examination, the tissue is fibrofatty with confluent granulomas of variable size. They are made of lymphocytes, plasma cells, epithelioid cells and giant cells of Langhans type. Foci of caseous necrosis are also present. Absence of tumor proliferation within the limits of the specimen received. In view of this aspect. In the light of these results, the diagnosis of pelvi-peritoneal tuberculosis was retained. The patient was put under antibacillary treatment with 2ERHZ/4RH.

DISCUSSION

This clinical case illustrates the difficulty of diagnosing peritoneal TB mimicking peritoneal carcinosis. Peritoneal TB is a curable disease whereas peritoneal carcinosis is pathology of poor prognosis. The clinical signs in both cases can be quite similar making the differential diagnosis difficult.

Peritoneal tuberculosis, which accounts for 1-2% of all forms of TB, can develop anywhere in the abdominal-pelvic cavity, but it mainly involves the omentum, intestinal tract, liver, spleen or female genitalia in addition to the parietal and visceral peritoneum [6]. The pathophysiology of peritoneal tuberculosis is often hematogenous dissemination from a primary pulmonary focus [7]. The main risk factors for peritoneal tuberculosis are HIV-infected patients, diabetes mellitus and the presence of an underlying malignancy [8].

The symptomatology is polymorphic and not very specific, and may sometimes simulate ovarian cancer. Indeed, pelvic pain, abdomino-pelvic masses, ascites and weight loss in a picture of

altered general condition may inaugurate the clinical picture in both pathologies. However, other clinical signs may be present, such as menstrual disorders like dysmenorrhea and amenorrhea, or urinary signs [9]. Infertility may be present in 5 to 10% of cases, and concomitant pulmonary or digestive involvement may point to this diagnosis, but is not constant and may be missed in 30 to 50% of cases [10].

Many studies in developing countries have shown that women are often misdiagnosed as having ovarian cancer, and it is only during surgery that the diagnosis of peritoneal tuberculosis is made [11].

Bacteriology of ascites can help in the diagnosis of peritoneal TB, but it has a low negative predictive value and cultures can take up to six weeks [12].

Among other diagnostic tools, CA 125 values can be used, often being elevated in ovarian carcinoma. However, CA 125 values can also be elevated in other conditions, such as an inflammatory state, making this cancer antigen aspecific for peritoneal TB [5].

As for the chest X-ray, it can be perfectly normal in 40% of TB patients, as was the case with our patient. Finally, tuberculin skin tests can diagnose tuberculosis infection, but a negative result does not rule out the disease. On the other hand, a positive tuberculin test does not indicate whether the infection is active or latent [13].

Therefore, the definitive diagnosis of peritoneal TB is currently often made during surgery where intraoperative biopsies are collected and analyzed [14].

Two studies using an enzyme-linked immunosorbent assay (ELISA) in the diagnosis of extrapulmonary TB have shown promising results, but more research is needed [15].

The treatment of pelvic tuberculosis is essentially medical. According to the World Health Organization and the American Thoracic Society, treatment for 6 months with intensive quadruple therapy (isoniazid, rifampicin, ethambutol, pyrazinamide) for two months, followed by 4 months of maintenance treatment with daily dual therapy (isoniazid, rifampicin) is recommended [16, 17].

Surgical treatment may be indicated in case of a compressive or fistulized mass to flatten the caseous cavities [18]. The prognosis of pelvic tuberculosis is related to infertility in young women. The risk of tubo-ovarian infertility is estimated at 39% [19].

CONCLUSION

Pseudotumoral peritoneal tuberculosis is a rare and curable infectious disease. Its clinical, radiological and biological symptomatology simulates either a malignant ovarian tumour or a bilateral hydrosalpinx associated with ascites. The prognosis is related to tubo-ovarian infertility.

REFERENCES

1. Ismaïli, Z., Amraoui, M., Mansouri, F., Essamri, W., Benazzouz, M., Essaïd, E.A. (2006). Pseudotumor colonic tuberculosis with dual location. *Médecine du Maghreb*, 142; 5-8.
2. Denis-Delpierre, N., Merrien, D., Billaud, E., Besnier, J. M., Duhamel, E., Hutin, P., & Raffi, F. (1998). Extrapulmonary tuberculosis in the central western region. Retrospective study of 217 cases (Gericco 1991-1993). *Presse medicale (Paris, France: 1983)*, 27(8), 341-346.
3. Romand, F., Gaudin, J. L., Bobichon, R., & Souquet, J. C. (1997). Abdominal tuberculosis of pseudotumor aspect. *Presse medicale (Paris, France: 1983)*, 26(36), 1717-1721.
4. Verspyck, E., Struder, C., Wendum, D., Bourgeois, D., Lariven, S., Marpeau, L. (1997). Peritoneal tuberculosis. *Ann chir*, 51 375-78. This article on PubMed
5. Barbier, J.P. (1975). Intestinal tuberculosis. *Encycl Méd Chir (Elsevier, Paris) Estomac-intestin*, 9060 A10.
6. Koc, S., Beydilli, G., Tulunay, G., Ocalan, R., Boran, N., Ozgul, N., ... & Erdogan, Z. (2006). Peritoneal tuberculosis mimicking advanced ovarian cancer: a retrospective review of 22 cases. *Gynecologic oncology*, 103(2), 565-569.
7. Mehta, J. B., Dutt, A., Harvill, L., & Mathews, K. M. (1991). Epidemiology of extrapulmonary tuberculosis: a comparative analysis with pre-AIDS era. *Chest*, 99(5), 1134-1138.
8. Rieder, H. L., Snider Jr, D. E., & Cauthen, G. M. (1990). Extrapulmonary tuberculosis in the united states1-3. *Am. Rev. Respir. Dis*, 141, 347-351.
9. Chow, K. M., Chow, V. C. Y., Hung, L. C. T., Wong, S. M., & Szeto, C. C. (2002). Tuberculous peritonitis-associated mortality is high among patients waiting for the results of mycobacterial cultures of ascitic fluid samples. *Clinical infectious diseases*, 35(4), 409-413.
10. Kosseifi, S., Hoskere, G., Roy, T. M., Byrd Jr, R. P., & Mehta, J. (2009). Peritoneal tuberculosis: modern peril for an ancient disease. *Southern medical journal*, 102(1), 57-59.
11. World Health Organization. (2017). The top 10 causes of death: Fact sheet. Updated January. <http://www.who.int/mediacentre/factsheets/fs310/en/> (Last accessed 13.02.2017)
12. Sharma, J. B., Jain, S. K., Pushparaj, M., Roy, K. K., Malhotra, N., Zutshi, V., & Rajaram, S. (2010). Abdomino-peritoneal tuberculosis masquerading as ovarian cancer: a retrospective study of 26 cases. *Archives of gynecology and obstetrics*, 282(6), 643-648.
13. Up To Date. (2017). Tuberculous Peritonitis. Tuberculous peritonitis Tuberculous peritonitis <https://www.uptodate.com/contents/tuberculous-peritonitis> (Last accessed 13.02.2017)
14. Moss, E. L., Hollingworth, J., & Reynolds, T. M. (2005). The role of CA125 in clinical practice. *Journal of clinical pathology*, 58(3), 308-312.
15. Bhattacharyya, S. K., Mandal, A., Thakur, S. B., Mukherjee, S., Saha, S. K., & Ghoshal, A. G. (2011). Radiological evaluation of chest in abdominal tuberculosis. *J Clin Diagn Res*, 5(5), 926-928.
16. Marshall, J. B. (1993). Tuberculosis of the gastrointestinal tract and peritoneum. *The American journal of gastroenterology*, 88(7), 989-999.
17. Vagenas, K., Stratis, C., Spyropoulos, C., Spiliotis, J., Petrochilos, J., Kourea, H., & Karavias, D. (2005). Peritoneal carcinomatosis versus peritoneal tuberculosis: a rare diagnostic dilemma in ovarian masses. *Cancer Ther*, 3, 489-494.
18. Blumberg, H. M., Burman, W. J., Chaisson, R. E., & Daley, C. L. (2003). American thoracic society/centers for disease control and prevention/infectious diseases society of America: treatment of tuberculosis. *American journal of respiratory and critical care medicine*, 167(4), 603.
19. Adsuar, N., Blanchette, H., & Kilchevsky, E. (2004). Tuberculosis peritonitis mimicking ovarian cancer in a 20-year-old woman. A case report. *The Journal of reproductive medicine*, 49(1), 52-54.