Peritoneal Tuberculosis in a Patient with HIV: Case Study in the Excellent Center in HIV/AIDS Care in Lubumbashi's University, Lubumbashi City

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Abstract: Tuberculosis is a disease of poverty. It is also a disease that prevents escaping poverty. There is a case report of disseminated tuberculosis with peritoneal involvement and peritoneal responsible for the clinical manifestations that may delay diagnosis. This location deserves mention as a share of expansion of tuberculosis in the presence of abdominal pain and bread signs of lung disease at a lower cost balance.

Key words: Diagnostic approach, AIDS (acquired immune deficiency syndrome), peritoneal tuberculosis.

1. Introduction

Peritoneal tuberculosis represents 13%-21% of all localizations of tuberculosis. It is an infection of the peritoneum by *Mycobacterium tuberculosis* and is in clinical anatomical plane in different forms. It is positive histological diagnosis, but it is difficult to make because of the physical and social economic fragility. In addition, given the cost of the biopsy and the anesthetic and surgical risk, this case report was conducted to assess the diagnostic approach in this condition.

2. Material and Methods

A 31-year old man has consulted the excellent Center of Lubumbashi's University integrated in Jason Sendwe Central Provincial Hospital for a progressive cough. He had abdominal discomfort and fever after he was subjected to a non-specific antibiotic for 1 month without favorable result. In his

history, it was noted that he was a widower and father of four children with HIV (human immunodeficiency virus) testing which was negative. In addition, the presence of contagion, alcoholism, smoking and the previous tuberculosis were not noted in this patient. Clinical examination showed a poor general condition with a body mass index of 16 kg·m⁻², febrile ascites (38.7 °C) accompanied by asthenia, anorexia, abdominal pain, abolition of whispers murmur at palpation, auscultation silent and dullness to percussion the right lung. Fig. 1 shows the clinical signs of calling a peritoneal tuberculosis and lung injury that will be confirmed by other assessments. The X ray chest indicated standing face and revealed the fibrous streak and the pleural effusion of right lung (Fig. 1).

The abdominal ultrasounds face has been realized back down and has revealed: the lymphadenopathy around the hilum of the spleen, the splenomegaly with micro nodular of 186 mm of diameter, the flat ascites with floating membrane, and the thickening parietal (Fig. 2). The profile of abdominal ultrasounds indicated

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Fig. 1 Thoracic radiology facing at admission.

Fig. 2 Abdominal ultrasound facing at admission.

Fig. 3 Abdominal ultrasound profile at admission.

and revealed the lymphadenopathy in the porta hepatis and around the celiac trunk (Fig. 3).

It was completed these investigations by laboratory tests in the blood which have revealed the presence of anti-HIV antibodies to detect the strategies and algorithms application in the Democratic Republic of Congo [1]. The Full Blood Count including the erythrocyte sedimentation rate reveals: the white blood cells are $5,000 \text{ mm}^3$, the rate of sedimentation is $105 \text{ mm} \cdot \text{h}^{-1}$, the hemoglobin is $9 \text{ g} \cdot \text{dL}^{-1}$, the polynuclear neutrophil is 25%, the lymphocytes are 70%, and the monocytes are 5%. The immunologic parameter was the lymphocytes CD4 + T count

($95 \text{ cells} \cdot \text{mm}^{-3}$). The sputum microscopy did not reveal the presence of *Mycobacterium Tuberculosis* in acid fast bacillus stain. The Rivalent test was positive and the ascetic fluid was citrine yellow appearance. The cytology of ascites was predominant by lymphocytes (70%) and the pleural fluid was not contributory. No biopsy specimen and other assessments, such as the culture of Bacillus of Koch, amylase, lactate dehydrogenase, and neoplastic cells in the ascites fluid were not made because of the social economic status of this patient to exclude certain similar conditions and diagnosis of certain biological and pathological level. Given the results of all investigations, the association peritoneal tuberculosis and HIV/AIDS (acquired immune deficiency syndrome) was retained and the patient was put under fasting cure of antituberculosis drug ($10 \text{ mg} \cdot \text{kg}^{-1} \cdot \text{day}^{-1}$ of rifampicin, $5 \text{ mg} \cdot \text{kg}^{-1} \cdot \text{day}^{-1}$ of isoniazid, $25 \text{ mg} \cdot \text{kg}^{-1} \cdot \text{day}^{-1}$ of pyrazinamide, and $20 \text{ mg} \cdot \text{kg}^{-1} \cdot \text{day}^{-1}$ of ethambutol) for 2 weeks and post asked antiretroviral therapy ($600 \text{ mg} \cdot \text{day}^{-1}$ of zidovudine, $300 \text{ mg} \cdot \text{day}^{-1}$ of lamivudine, and $600 \text{ mg} \cdot \text{day}^{-1}$ of efavirenz) associated with prophylactic dose of cotrimoxazole ($480 \text{ mg} \cdot \text{day}^{-1}$).

3. Comments

These comments will carry on diagnostic considerations as therapeutic aspects are no problem in condition.

The non-specificity of symptoms and especially the lack of diagnostic certainty arguments such as bacteriological or histological evidence for the presence of *Mycobacterium tuberculosis* make it difficult to diagnose.

The symptomatology was dominated by an array of febrile ascites followed by other signs of tuberculosis impregnation [2]. This observation suggests that pulmonary tuberculosis infection has spread to the peritoneum causing both pulmonary and peritoneal manifestations. The peritoneal tuberculosis is associated with pulmonary tuberculosis in 3.5% of

cases, and localization directs and facilitates the diagnosis. In the absence of above association, the diagnosis is more difficult [3].

The X ray chest face can help to highlight this association, but it generally brings little contribution due to non-specific images induced by HIV infection [4]. In this observation, the pleural effusion of the right lung was not contributory to biological analyzes. This can be explained firstly by the presence of fibrous drag on right lung revealed by X ray chest (Fig. 1). This suggests the good inflammatory and immunological response, the order is the contamination of the visceral pleura by *Mycobacterium tuberculosis* without superinfected the effusion. This suggested a clear appearance. The *Mycobacterium tuberculosis* is rarely found in pulmonary or extra pulmonary tuberculosis [5]. However, in a high equipped country, the detection of *Mycobacterium tuberculosis* can be done between 24-48 h by PCR (polymerase chain amplification) with a sensitivity of 60%-80% [6].

The aspiration of ascetic fluid is an important part in the diagnosis of peritoneal tuberculosis in showing exudative, citrine yellow liquid rich in protein and lymphocytic white element in 69%-89% of cases [7].

The abdominal ultrasound can help to diagnose the ascetic fluid, nodules, lymphadenopathy with necrotic center highly suggestive peritoneal tuberculosis [8]. In addition, it can objectify the floaters and wall thickening from inflammatory appearance showed by laparoscopy in peritoneal tuberculosis [9]. These findings were founded in this observation.

4. Conclusion

This case illustrates the difficulty of making the diagnosis. The social status of this patient did not allow us to accede superior technical platform. This infection should be discussed by the clinician on

indexes of suspicion anamnesis, clinical, biological and imaging. However, the definitive diagnosis remains histological.

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