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Abdominal Tuberculosis Mimicking Cancer: About Two Cases

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Abstract **Case Report**

Abdominal tuberculosis can simulate a malignant tumor pathology, due to the non-specificity of clinical signs, especially in the context of deterioration of the general condition. The existence of associated lung involvement and progress of tuberculosis may point to the diagnosis. We represent two observations of abdominal tuberculosis, the 1st is related to intestinal tuberculosis which simulated a tumor process of the transverse colon, for the 2nd observation we put the point on a peritoneal tuberculosis which the diagnostic was performed by the histological proof, the evolution was marked by a good improvement under treatment, the interest in taking into account the diagnostic difficulties of abdominal tuberculosis, even in countries of endemic in order to avoid any diagnostic delay.

Keywords: Abdominal tuberculosis, tumor pathologies, extra-pulmonary tuberculosis, two cases.

I. INTRODUCTION

Abdominal tuberculosis takes third place among extra-pulmonary tuberculosis, the diagnosis is often difficult. the clinical and radiological characteristics lack specificity, its clinical and radiological presentations often compatible with a multitude of infectious, inflammatory and malignant pathologies [1], Which it possible to produce an erroneous diagnosis and consequently the therapeutic management will be confused, makes it possible to miss a pathology having the reputation of being curable and good prognosis. The objective of this work is to expose two cases of abdominal tuberculosis revealed by a misleading symptomatology, where the diagnosis was made on a set of arguments for which the imaging played a primordial role, the bacteriological research, the contribution of laparoscopy and histological evidence.

II. PATIENTS AND OBSERVATIONS

Observation n°1

A.N, 51-year-old, known under treatment of arterial hypertension for 5 years, admitted to our service with the onset of maximum diffuse chronic abdominal pain in the right iliac fossa, evolving for a year, no other digestive or extra-digestive manifestations. The clinical examination showed that the patient was afebrile, with an alteration of the general condition made of weight loss estimated at 10 kg in six months and asthenia, the abdominal examination showed a slight diffuse abdominal tenderness. The digital rectal examination was painless without abnormalities and the finger cot came back clean.

The blood count showed hemoglobin at 7.9 g / dl, white blood cells at 5260, platelets at 309,000, the search for BK and expert gene in sputum were negative, the quantiferon was positive , the rest of the biological assessment was unremarkable including tumor markers which were negative, the abdominal computed tomography showed a wall thickening of the transverse colon at the level of its right half, with a maximum thickness of 17 mm extended over approximately 10 cm, irregular spiculate infiltrating the neighboring fat which is the seat of multiple neighboring ganglia and peritoneal nodules which had oriented in front of its seat and its localization towards a tumor of the transverse colon (Figure 1). Total colonoscopy revealed the presence of a budding, hemorrhagic, stenosing, impassable process under the endoscope, friable on biopsy, the pathology of which was in favor of granulomatous colitis with caseous necrosis without signs of malignancy. A surgical exploration was made thus allowing a segmental resection with an anastomosis in one step. An anti-tuberculosis treatment was instituted marked by a good evolution of the symptoms.

Observation n°2

S.M, 21-year-old, with no particular pathological history, admitted to our service for an etiological assessment of a higher abundance for ascites in a context of profound deterioration of the general condition, the clinical examination was carried out. objectified a conscious patient, hemodynamically and respiratory stable, a distended abdomen with the presence of collateral venous circulation, sloping dullness of the flanks with peri-umbilical tympanism, for the examination of the anal margin and the digital rectal examination was without abnormalities .

The blood count showed a hemoglobin level of 13.9, leukopenia at 2600, a platelets count at 375,000, the search for BK and expert gene in the sputum were negative, the rest of the biological assessment was unremarkable, including tumor markers which were negative, exploration of ascitic fluid found ascites rich in protein with a protein level of 35 g / dl, the dosage of adenosine deaminase was 37, research for cells malignancies in ascites fluid was negative. Abdomino-pelvic tomodensitometry shows circumferential and irregular thickening of the sigmoid colon measuring 11 and 15 mm thick, enhanced by contrast, associated with a high abundance of ascites occupying the entire abdomino-pelvic cavity with infiltration of the omentum apron and mesenteric fat, peritoneal nodules measuring 18x20 mm at the pelvic level for the largest. With a lower mesenteric mass of 42x72 mm, moderately enhanced by the contrast in close contact with free vessels, possibly suggesting a tumor origin in the first place (Figure n ° 2), the patient was proposed for an exploratory laparoscopy. Surgical exploration revealed the presence of peritoneal and omentum nodules. The histological study revealed a granulomatous epithelio-giganto-cellular lesion with giant cells like langerhans, centered in places by a caseous necrosis, so the anti-bacillary treatment was started with a good clinical evolution, the patient had regained weight with disappearance of all clinical signs.

Figure 1: Abdominal CT image in favor of a wall thickening of the transverse colon at the level of its right half, 17 mm maximum thickness extended over about 10 cm, irregular spiculate infiltrating the neighboring fat (a) which is the site of multiple neighboring nodes and peritoneal nodules (b)

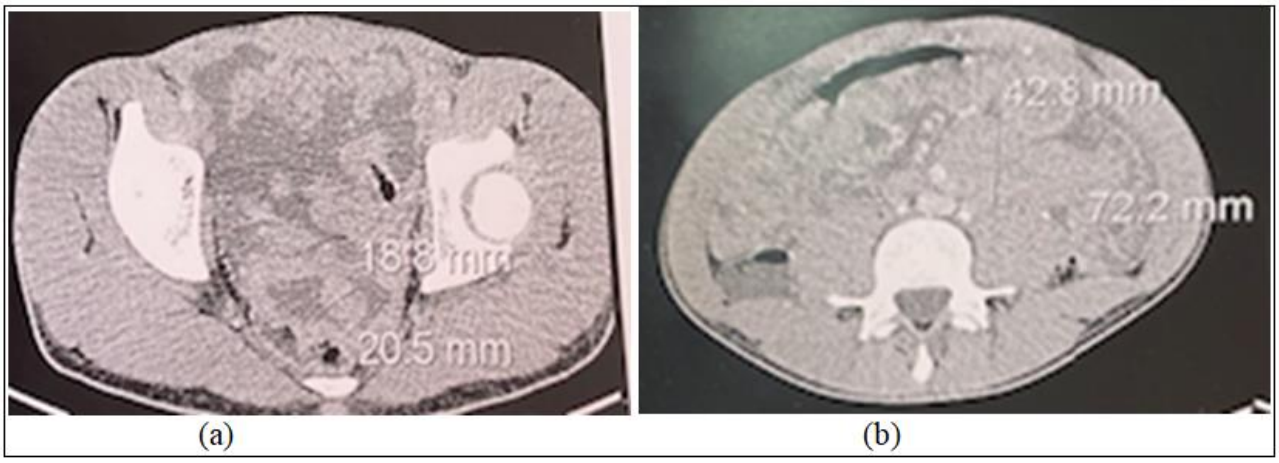

Figure 2: Abdominal CT image showing a circumferential and irregular thickening of the sigmoid colon measuring 11 and 15 mm thick, enhanced by the contrast, associated with an ascites of great abundance occupying the entire abdominopelvic cavity with infiltration of the omentum and mesenteric fat, peritoneal nodule measuring at pelvic level 18x20 mm for the largest. (a) Lower mesenteric mass of 42x72 mm, (b) moderately enhanced by the contrast in close contact with free vessels which may suggest a tumor origin in the first place

III. DISCUSSION

Tuberculosis (TB) is a contagious, endemo-epidemic disease, mainly transmitted from person to person due to the Mycobacterium tuberculosis (MT) complex including Mycobacterium tuberculosis hominis, Mycobacterium bovis and Mycobacterium africanum. Lung involvement is the most common of the locations and represents the usual source of transmission. The bacillus can reach other organs, causing extra-pulmonary tuberculosis. As early as 1986, there was an upsurge in tuberculosis throughout the world, as well as the role of HIV / AIDS infection. HIV infection has therefore led to a resurgence of tuberculosis around the world, particularly in sub-Saharan Africa and Southeast Asia, continents where tuberculosis was still endemic. Abdominal tuberculosis is a relatively rare form of extra-pulmonary tuberculosis, even in endemic countries. Indeed, it represents 5 to 10% of all locations and is associated with pulmonary involvement in 15% of cases [2]. Its frequency is considerably higher in seropositive subjects where it can even double or triple. Romand et al. estimate it at 13.5% in a study of 199 HIV-positive patients [2, 3]. In abdominal tuberculosis, all organs can be affected. Peritoneal localization tops the list. In the West, this peritoneal involvement remains rare and mainly affects transplanted subjects living in defective hygienic conditions [4]. In the United States, for example, it appears to be in the order of 0.5% of new TB cases and accounts for 3.8% of extra-pulmonary TB [5].

The situation is different in developing countries where this disease predominates: it represents 34% of all tuberculosis and 75% of abdominal tuberculosis in Morocco [6], 3% of tuberculosis hospitalized in Saudi Arabia [7] and 0.5 to 1% in Latin America and Asia [8]. In second position, comes the digestive localization where one identifies an attack of the small intestine first (44%), then the cecum (35%) and the ileo-cecum (16%) [9]. Isolated colon involvement is rare, estimated to be between 2% and 9%, and is dominated by involvement of the right colon [10]. The other abdominal locations concern, in descending order: the lymph nodes, liver, spleen and pancreas [11] as well as the ovary. This organ obviously belongs to the pelvis but is often manifested by abdominal symptoms. The pseudo-tumor entity is difficult to assess. In fact, there is a high rate of diagnostic error due to a non-specific, polymorphic symptomatology, which is highly simulating, leading to suspicion of a tumor process above all else.

The clinical manifestations of tumor-like abdominal tuberculosis are protean, often creating a misleading picture, particularly among people with AIDS in whom the possibility of infection by several germs makes the clinic even more confusing. This explains the evolution of the disease at the time of diagnosis. The onset is usually slow and gradual, with an almost constant febrile syndrome. The fever is usually moderate and prolonged, taking on various aspects, including pseudopalustrine and pseudotyphic. The deterioration of the general condition is more or less important, marked by weight loss, anorexia and asthenia. Our patients remained faithful to this general symptomatology. Peripheral inguinal and epitrochlear lymphadenopathy may also be seen [11]. These general manifestations are accompanied by signs inherent in each location, abdominal pain being the main symptom; whereas a real abdominal mass or organomegaly is inconstantly found. The biology is not specific to the pseudotumoural involvement of tuberculosis, whether it is anemia or inflammatory syndrome. Intradermal reaction (IDR) to tuberculin is not evidence of the tuberculosis nature of the condition.

Abdominal ultrasound and computed tomography, a decisive step in the diagnosis of this pseudotumoral form. Medical imaging can range from a simple chest x-ray, which may show active or sequelae pulmonary tuberculosis, to the unprepared abdomen which may show lymph node, hepatic or splenic calcifications, to ultrasound, CT scan and MRI. The contribution of these three examinations will be detailed according to each location. Ultrasound, CT scan and nuclear magnetic (MRI) signs are not specific, but some lesion associations are suggestive of tuberculosis. CT is the test of choice for accurate disease assessment [12]. Intestinal involvement predominates at the ileoccal intersection and presents as agglomerated loops, thick-walled, usually concentrically [13]. The usually concentric wall thickening can, when it is eccentric and with extrinsic exophytic development, simulate more a tumor attack than an inflammatory attack. This thickening can be heterogeneous with hypodense foci in relation to the cased necrosis; The diagnosis of tuberculosis remains difficult, and involvement of the ileoccal intersection can mimic other conditions such as Crohn's disease, neoplasia, or appendicular tumor [13].

The tuberculosis infection can also affect any other segment of the digestive tract. It is often represented by agglutinated loops, hypertrophic digestive parietal infiltration with peritoneal nodules, and a cluster of deep lymphadenopathy, particularly mesenteric. But this aspect may be lacking, and in the presence of an eccentric irregular hypertrophic digestive infiltration, a tumor origin is often mentioned [14]. Lymph node localization in intra-abdominal tuberculosis may also be the cause of the pseudotumor appearance. It may be a cluster of small agglomerated adenopathies satellite of digestive, peripancreatic or hepatic pedicle involvement. This grouping, however specific for tuberculosis, more often leads, because of the site of the lesion, to a tumor pathology [17]. Solid organ tuberculosis, in its single or multiple macro-nodular hepato-splenic form, may mimic primary or secondary malignant tumor lesion [17]. Exceptional forms of peritoneal tuberculosis such as the fibro-

adhesive form and the ulcerative-caseous form can also give a pseudotumoral appearance [14].

The fibro-adhesive form, for its part, poses the differential diagnosis with carcinoid tumors. The contribution of MRI in this abdominal location is nonspecific; this examination shows T1 hypointense lesions with a variable T2 signal during lymph node and visceral locations. Faced with a highly suggestive aspect of the imaging, an etiological assessment should be initiated to detect other locations that may support the diagnosis. If the doubt persists, a guided puncture under ultrasound or CT scan with histological study would make it possible to make the diagnosis [14]. Endoscopy allows the pseudotumor to be visualized and the necessary biopsies to be taken to make the diagnosis. It is more sensitive than radiology. In colonoscopy, on the one hand, we can visualize the mass to specify its appearance (swelling, pseudo-polyp) [15], its site and its volume, and on the other, perform biopsies. Other macroscopic aspects suggestive of digestive tuberculosis may be associated with this mass: mucous nodules, ulcers of variable size, strictures or even polyps. The great polymorphism of the radioclinical picture, the limits of biological and bacteriological examinations combined with the ambiguity of the imaging, explain the use of exploratory surgery in front of a suspicious mass of undetermined origin.

Surgical exploration and which most often involves intestinal resections with or without restoration of continuity or internal diversions or ostomies. The choice of a resection should always take into account the extent of the resection. If it were to be too extensive, especially in the ileum, ostomies should be preferred, relying on anti-tuberculosis treatment to reduce the extent of secondary resections that would be necessary [16]. The intraoperative findings do not always allow recognition of the tuberculous nature of these pseudotumoral forms and the diagnosis will only be definitively made after histological examination of the operative specimen [17]. This surgical treatment should be combined with anti-tuberculosis treatment. The nature of the postoperative complications does not differ from that seen in other indications. On the other hand, both their high frequency and postoperative mortality can be explained by the fact that they are tuberculosis patients, often coming for a late consultation, in very poor general condition [18].

IV. CONCLUSION

Pseudo-tumoral abdominal tuberculosis still poses diagnostic difficulties even in endemic countries despite the development of imaging means, through these two observations, we can deduce the interest of using other biological and histological evidence, specificity of clinical, biological and radiological signs makes histological examination essential for the diagnosis of abdominal tuberculosis.

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