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Surgery

Diagnostic Difficulties of Gastrointestinal Tuberculosis in the Digestive and Proctological Surgery Department of the Treichville Chu About 4 Cases

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Abstract | **Case Report**

Abdominal tuberculosis accounts for 3 to 13% of extra-pulmonary tuberculosis cases. Gastrointestinal tuberculosis (GIT) is rare, and the signs are poorly recognized, leading to misdiagnosis. ***Purpose****:* To study the clinical and paraclinical epidemiological confounding factors through 04 cases observed in the digestive and proctological surgery department. ***Observations****:* One woman and three men were admitted for an abdominal surgical emergency (n=1) and a proctological emergency (n=3), respectively. The diagnosis of gastrointestinal tuberculosis was made after a diagnostic error. Confounding factors were dominated epidemiologically by HIV sero-negativity and the absence of tuberculosis infection (n=3). Associated with this were nonspecific reasons for consultation (anal suppuration (n=3) and stabbing abdominal pain (n=1). Clinical polymorphism suggested an anal fistula (n=2), respectively a fistulized prostate tumor and a gastric perforation on probable tumor. Imaging was nonspecific for the majority and the IDR was negative in all. The procedures were dominated by fistulotomy. histopathological analysis of the sampled tissues showed giant cell granulomatous inflammation in half of the cases. Xpert gene and PCR corrected the diagnosis in two cases. The evolution was morbid in all patients and one death in respiratory distress was observed. ***Conclusion****:* At the end of this study, we can say that gastrointestinal tuberculosis is polymorphic and nonspecific clinical expression. Diagnosis is difficult due to mimicry factors. The absence of HIV, clinical, radiological and histological polymorphism are the main misleading factors. Rapid and molecular detection tests could have an impact on the real prevalence of this pathology in the surgical and proctological specialty.

Keywords: gastrointestinal tuberculosis; misguiding factors.

INTRODUCTION

Tuberculosis is a real public health problem in the world [1]. Its abdominal locations represent 3-13% of extra-pulmonary forms [2]. These abdominal tuberculosis affect both the digestive tract and other organs of the abdomen. Gastrointestinal tuberculosis (GIT) is rare because it represents between 0.004 and 1% of extra-pulmonary tuberculosis [3]. Cases of gastric and anal tuberculosis have been described [4,5]. It is a disease of economically weak countries and immunocompromised subjects [6]. Diagnosis is difficult because the signs are not specific. GIT can mimic other inflammatory diseases and thus mislead the diagnosis. [7, 8]. The result would be wandering of the patient which would be responsible for high morbidity and mortality. The aim of our work was to report 4 cases recorded at the Treichville University Hospital and to discuss the factors of misdirection on the epidemiological, clinical and paraclinical level

OBSERVATIONS

Patient (P1)

57-year-old patient, HIV-1, admitted for suppurative anal ulceration. Endoscopy and swab were non-contributory. A colostomy and local care were performed. Two years later, he presented with weight loss and urinary leakage at the anal area. An MRI revealed an infiltrating anal pseudotumor. The prostate with a urethral fistula. Anal biopsy and pathological examination revealed granulomatous anitis without caseofollicular necrosis. The intradermal tuberculin reaction (IDR) was negative and the chest X-ray was normal. The Xpert gene and PCR were positive. The evolution was favorable at the 2nd month of antituberculosis treatment.

Photo 1: posterior urinary leak during urination (P1) (archive of the digestive and proctological surgery department at Treichville University Hospital)

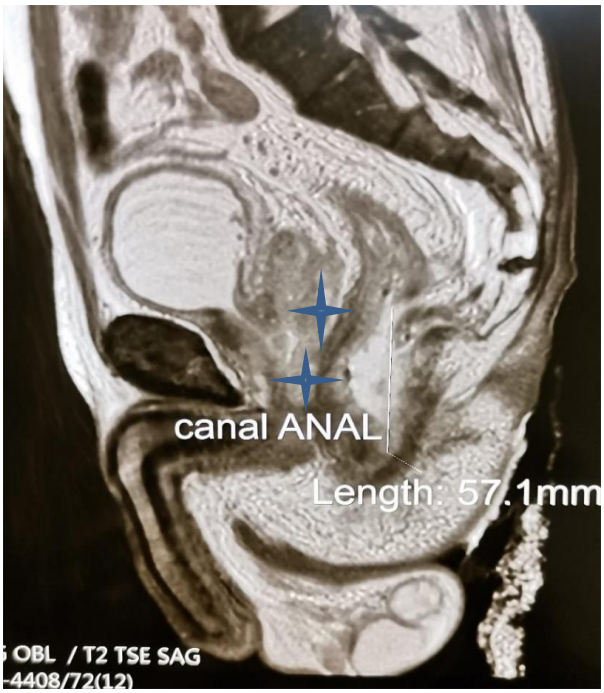

Figure 2: Pseudotumoral anal tuberculosis (blue star) (yellow star: uretro-anal fistula) (archive of the department (archive of the digestive and proctological surgery department of the Treichville University Hospital)

Patient (P2)

51-year-old patient with a history of unexplored epigastralgia and tuberculosis treated for 6 months, but without a certificate of cure. Admitted for sudden abdominal pain. Clinical examination revealed peritonitis. Biology found hyperleukocytosis. Chest X-ray revealed opaque left lung destruction and pneumoperitoneum. Laparotomy revealed gastric

perforation with mesenteric adenopathy. Gastrorrhaphy was performed. The IDR was negative. The progression was marked by suppuration then evisceration. The identified Escherichia coli was treated with imipenem. Histology found a giant cell granuloma with caseous necrosis. The patient died from respiratory distress despite well-conducted resuscitation.

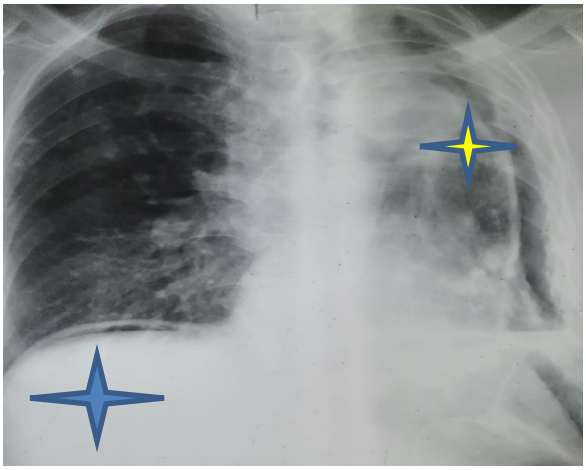

Figure 3: Chest X-ray showing pneumoperitoneum (blue star) and a destroyed left lung field (yellow star)

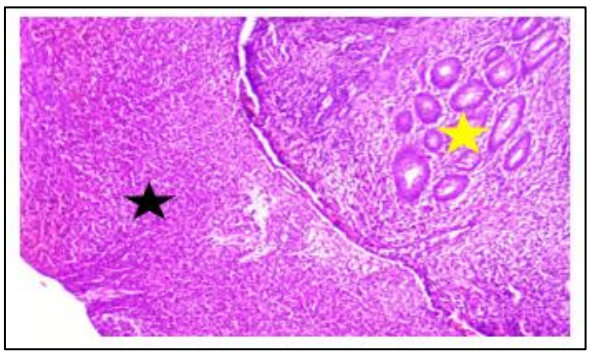

Figure 4: Epitheliogigantocellular granuloma (tuberculoid granuloma) with fibrinoid necrosis (black star) in contact with antral glands of the stomach (yellow star) (Hematoxylin eosin, x 400) Archive of the histology department of the CHU of Cocody

Patient (P3)

A 32-year-old patient, who had undergone multiple operations for an anal fistula, was admitted for recurrent perineal suppuration. A proctological examination revealed a complex anal fistula and slight weight loss. During the fistulotomy, it was a complex posterior rectoperineal fistula. The chest X-ray was normal, and the tuberculin IDR was negative. Histology revealed anal tuberculosis. The outcome was favorable under RHZE.

Photo 2: Post-operative photo of a recurred complex anal fistula. Old scar (yellow star). Surgical wound (blue star). Seton (red star) (archive of the department (archive of the digestive and proctological surgery department of Treichville University Hospital)

Patients (P4)

38-year-old patient, history of fever, weight loss admitted for a fistula, chesty cough for 5 months. Clinical examination found pulmonary consolidation and a complex anal fistula. IDR was negative and chest X-ray found opacities suspicious of malignancy. Cytobacteriological examination (CBE) of sputum was negative but culture on Löwenstein Jensen medium was not available. Histopathological examination of the biopsy specimen found a giant cell granuloma without caseous necrosis. The Xpert gene was positive. We suspected bifocal tuberculosis (pulmonary and anal) and RHZE quadruple therapy was initiated

Photo 3: Posterior anal fistula in cachexic patient (Departmental archive (Digestive and Proctological Surgery Department archive, Treichville University Hospital)

DISCUSSION

Tuberculosis of the digestive tract is characterized by a diagnostic delay. This diagnostic delay can be favored by several factors leading to diagnostic error. Epidemiologically, GIT is rare (0.004-0.1%) [3]. Due to this epidemiological apprehension, this diagnosis was rarely mentioned by health professionals. On the other hand, it is a disease of HIV-immunocompromised subjects [6,9]. However, this observation could be a misleading argument because of the 4 cases observed in our study, only one was HIV positive. Tuberculosis of the digestive tract can also occur in HIV-negative subjects [10]. This means that HIV can be a confounding factor. The predominance of HIV-negative patients in our study would mean that there would be other contributing factors. For example, a notion of contagion or a previous episode of tuberculosis. However, only one had presented with previous tuberculosis. The interview confused us further

Clinically, it was a polymorphism of signs that were aspecific and depended on the digestive segment involved. This is why Benzerga et al characterized this as a great mime. They had wrongly diagnosed a chronic inflammatory disease [7]. In our work, we wrongly treated 03 cases of anal suppurations that were expressed in the form of anal fistula. This anal fistula was for us a factor of diagnostic misdiagnosis. They were respectively a post-fistulotomy recurrence in one case, and two cases of anal fistula with presumed tumor. The urethro-anal fistula with loss of urine was a priori evidence of local invasion (n = 1). In the last case, it was cachexia and pulmonary condensation that suggested distant metastasis. When the lesion is located in the upper part of the digestive tract, it may show signs of gastric involvement, as in one of our cases [11]. Indeed, a patient had suffered from epigastralgia before perforating. We wrongly suggested a perforation of a gastric ulcer or even a neoplasia given the pulmonary opacities and the peroperative lymph nodes. Tuberculous gastric perforation is a rare complication due to the low pH and the structure of the stomach [3,12]. The diagnosis is always made post-operatively or post-mortem, as in the work of Deborshi *et al.,* [4]. Given this diagnostic vagueness, paraclinical factors must be prioritized.

In this bundle of paraclinical arguments, biology showed a predominantly neutrophilic hyperleukocyte in 2 cases. These results confirmed our erroneous diagnoses. As for standard chest X-rays, they can contribute to the diagnosis by showing images of opacity. However, these images can be observed in other inflammatory or infectious pathologies and are not specific [13]. These images were normal in two cases. This could have led us to wrongly rule out tuberculosis. In our work, two patients presented with an image of destruction of the left lung field. They were diagnosed respectively with an anal fistula and one with gastric

perforation. We suspected neoplasia or bifocal tuberculosis in these two cases. These cases are very rare [14]. According to Klimach et al, gastric tuberculosis is often associated with concomitant pulmonary tuberculosis [15]. We therefore performed the IDR and the search for BK in the sputum. The IDR is unreliable and can be negative in all our cases [1;16]. This result can lead to a diagnostic error. Its negativity does not exclude active tuberculosis and its positivity does not confirm a latent or active form of tuberculosis [7]. The examination of sputum with Ziehl Neelsen staining is very characteristic for the search for AFB but not very profitable with 20% positivity on the one hand [17]. On the other hand, the constraints of sputum collection and storage can also limit the effectiveness [13]. All these arguments sometimes contribute to the diagnostic delay [13]. Faced with these diagnostic difficulties, endoscopy or MRI are sometimes the best orientation examinations because they can visualize a lesion or specify the site and the relationships and perform biopsies [13]. Endoscopy in our work was most often non-contributory because it also depends on the patient's preparation. Histology helped correct our diagnoses in two cases by showing the image of granuloma with typical caseous necrosis. However, histology can be ineffective in deciding between Crohn's disease and tuberculosis [18]. In these cases, we can resort to rapid tests and molecular culture such as PCR, which is sensitive and specific at over 65%. [17,19]. Furthermore, the Xpert MTB/RIF gene assay is the only rapid test recognized by the WHO [1]. Combined with PCR, they remove diagnostic doubt, as in two of our cases.

CONCLUSION

At the end of this study, we can say that gastrointestinal tuberculosis is polymorphic and nonspecific. Diagnosis is difficult due to mimicry factors. The absence of HIV, clinical, radiological, and histological polymorphism are the main factors of misdirection. We believe that the development of rapid and molecular detection tests could have an impact on the actual prevalence of this pathology in the surgical and proctological specialty.

NB: The authors declare that they have no conflicts of interest in this work

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