

A Diagnostic and Therapeutic Dilemma: Intestinal Tuberculosis

Omer Faruk Ozkan^{1*}, Ceren Canbey Goret², Nuri Emrah Goret³, Sema Yuksekdog¹ and Ethem Unal¹

¹Department of General Surgery, Umraniye Research and Education Hospital, Health Sciences University, Istanbul, Turkey

²Department of Surgical Pathology, Sancaktepe Research and Education Hospital, Health Sciences University, Istanbul, Turkey

³Department of General Surgery, Canakkale State Hospital, Canakkale, Turkey

*Corresponding author: Omer Faruk Ozkan, Department of General Surgery, Umraniye Research and Education Hospital, Health Sciences University, Istanbul, Turkey, E-mail: ozkanfomer@gmail.com

Received date: December 20, 2017; Accepted date: December 28, 2017; Published date: December 29, 2017

Copyright: © 2017 Ozkan OF, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Short Communication

Tuberculosis is a systemic infection caused by *Mycobacterium tuberculosis*, generally spread through air, and can affect all organs from the respiratory system to the gastrointestinal system. Intestinal tuberculosis (ITBC) develops when the intestines are infected with *M. tuberculosis*. The gastrointestinal system is the sixth most common location in which tuberculosis is seen, after the

extrapulmonary genitourinary, lymphatic, muscular, skeletal, and nervous systems [1]. Atypical abdominal pain, weight loss, diarrhea, night sweats, and gastrointestinal bleeding symptoms can be seen in patients with ITBC. Although there are still discussions on the reasons for this, it is thought that the ileum and ileocecal area being rich in lymphoid tissue, affinity of bacillus towards lymphoid tissue, and slow passage due to the valve in the cecum are responsible (Figure 1) [1-3].

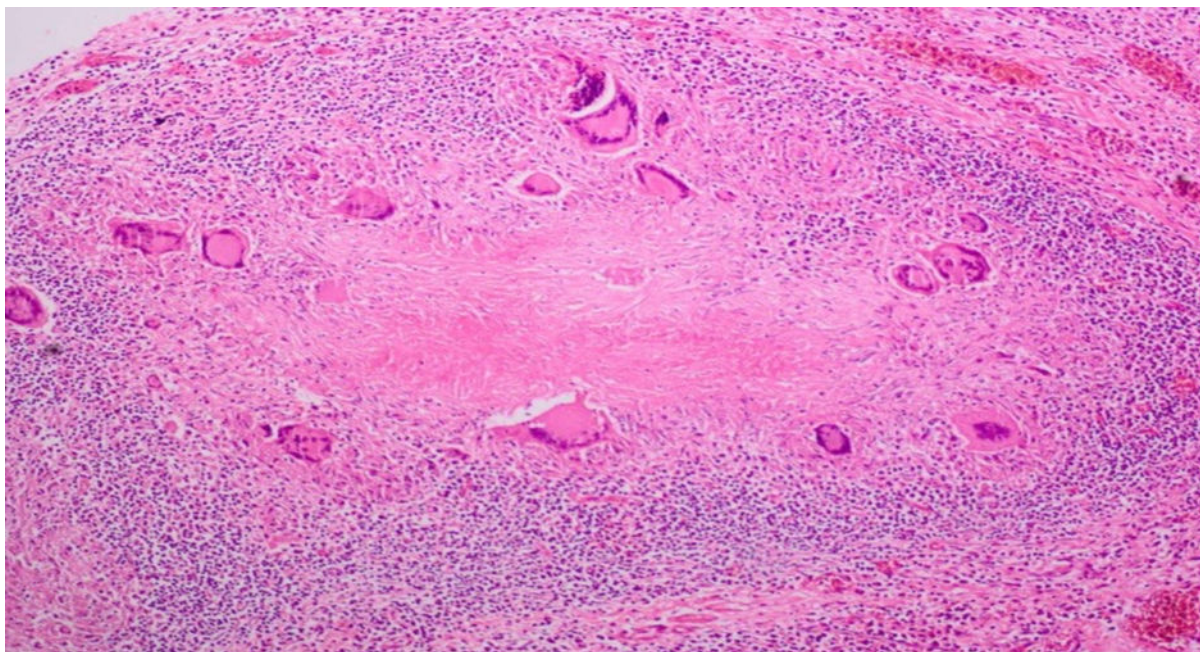


Figure 1: Necrotizing granulomas along with Langhans type giant cells (magnification x10; haematoxylin & eosin).

In recent years, there has been an increase in the incidence of pulmonary and extrapulmonary tuberculosis in developing countries, especially in developed or less developed dense population with a large number of migrants, and increase in HIV positivity, number of patients undergoing immunosuppressive treatment, number of patients with chronic liver disease and chronic kidney failure, and number of substance and drug addicts [2,3]. ITBC can be primary or secondary. Primary ITBC involves the reactivation of a previously acquired bacillus, whereas secondary develops by hematogenous spread of active lung tuberculosis, swallowing infected phlegm, contaminated food or drinks, and being in the vicinity of tuberculosis patients [2,3].

Diagnosis of abdominal tuberculosis is difficult for clinicians, especially because most symptoms and findings in patients, without accompanying lung tuberculosis, are nonspecific and mimic other inflammatory pathologies. Detection of the bacillus is the cornerstone in the diagnosis; however, this may not always be easy. Although the specificity of positive tuberculosis skin test is low, it can be helpful. EZN staining, polymerase chain reaction, and culture of biopsied materials via endoscopic methods are also useful. While PCR has the highest sensitivity, reproduction rate in culture is <30%. Another disadvantage of the bacterial culture is that results are obtained after a long time, which causes delay in starting the treatment; this has made PCR become more prominent [4]. In acidic fluid sample, the presence

of enriched lymphoplasmacytoid cells of serum acid albumin gradient (SAAG) of <1.1 is the most important characteristic of tuberculosis-dependent acid. When the cut-off point of the adenosine deaminase level in the acidic fluid sample is taken as 39 IU/L, its sensitivity and specificity are high [5-7].

During the diagnosis process, ulcers or hypertrophic lesions or both may be seen together; histopathology examination of biopsy reveals granulomatous inflammation, necrosis, and giant cells in the mucosa and submucosa. Also, seeing caseous granuloma in diagnosis is pathognomonic for ITBC, but its incidence is approximately 30% (Figure 1)

Another method that can be used for diagnosis is laparoscopy and laparoscopically-acquired peritoneal biopsy. Intra-abdominal adhesions can cause severe injuries during laparoscopic operations, and thus, laparoscopic operations should be performed by experienced surgeons. If there is still no diagnosis at this point, laparotomy is a method that can be utilized in abdominal tuberculosis [4,5].

Considering the developments in the world such as intercontinental travel and immigration movements, in the future, ITBC cases will be seen more frequently. Additionally, as ITB can clinically mimic Crohn's disease, intestinal lymphoma, tumors, which are inflammatory intestinal diseases, the diagnosis is still very difficult despite the current developments [6-8]. The patients who are admitted with mentioned complaints in underdeveloped and developed countries, especially

taking in immigrants from countries that have the endemic must be carefully questioned and ITBC must be taken into consideration, especially in differential diagnosis.

References

1. Djuwantono T, Permadi W, Septiani L, Faried A, Halim D, et al. (2017) Female genital tuberculosis and infertility: serial case report in Bandung, Indonesia and literature review. BMC Res Notes 10: 683.
2. Sanai FM, Bzeizi KI (2005) Systematic review: tuberculous peritonitis-presenting features, diagnostic strategies and treatment. Alimant Pharmacol Ther 22: 685-700.
3. Aslan G, Kuyucu N, Calikoglu M, Ersoz G, Ulger M, et al. (2009) Tuberculosis Cases Caused by Mycobacterium bovis. ANKEM Derg 23: 182-187.
4. Akpolat T (2009) Tuberculous peritonitis. Perit Dial Int 29: s166-169.
5. Sanches I, Carvalho A, Duarte R (2015) Who are the patients with extrapulmonary tuberculosis? Rev Port Pneumol 21: 90-93.
6. Ozkan OF, Ozkul F, Caymaz I, Güner A, Kant A, et al. (2013) A case of intestinal obstruction due to ileocecal tuberculosis. Turk J Gastroenterol 24: 190-192.
7. Goret CC, Goret NE, Ozdemir ZT, Ozkan EA, Dogan M, et al. (2015) Diagnostic value of fine needle aspiration biopsy in non-thyroidal head and neck lesions: a retrospective study of 866 aspiration materials. Int J Clin Exp Pathol 8: 8709-8716.
8. Dayal S (2017) Synchronous Colon Carcinoma and Tuberculosis: Coincidence or Linked. Euroasian J Hepato-Gastroenterol 7: 97-98.