

Small Intestine Perforation in Systemic Tuberculosis: Case Report

Sistemik Tüberküloziste İnce Barsak Perforasyonu

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ABSTRACT The incidence of intestinal tuberculosis (ITB) is ever-increasing in western and developed countries. ITB is experienced as various complications including perforation. Our patient was operated due to acute abdominal pain. There was a mass in ileocecal valve, two perforations in ileum, nodular lesions, and strictures in large part of small intestine. Mikulicz ileostomy was achieved following the small intestine resection. ARB test was performed due to suspected tuberculosis. Then, anti-tuberculosis treatment was initiated based on the positive +++ ARB. After the treatment, the mass was still observable by the colonoscopy. The patient was retaken to the operation. It was seen that intestinal nodules and strictures regressed. Right hemicolectomy was applied for the mass in the cecum. It should be remembered that early diagnosis and anti-tuberculosis treatment facilitate the improvement and healing of the anastomosis. Even if there isn't tuberculosis sign in ileocecal masses, tuberculosis should be considered for differential diagnosis.

Key Words: Intestinal perforation; tuberculosis; abdominal pain

ÖZET İntestinal tüberküloz insidansı batı ülkelerinde ve gelişmiş ülkelerde giderek artmaktadır. İntestinal tüberküloz perforasyonu da içeren çeşitli komplikasyonlarla karşımıza çıkmaktadır. Bizim olgumuzda hasta akut batın nedeni operasyona alındı. Eksplozasyonda ileoçekal valvde kitle ve ileumda iki yerde perforasyon mevcuttu. İnce barsakların tümüne yakınında nodüler lezyonlar ve striktürler mevcuttu. İnce barsak rezeksiyonu ve ardından mickulitz ileostomi açıldı. Tüberküloz şüphesiyle ARB testi yapıldı. ARB (+++) pozitif olması üzerine anti-tüberküloz tedavi başlandı. Tüberküloz tedavisini aldıktan sonra hasta kontrollerinde kolonoskopide kitlenin devam etmesi üzerine operasyona alındı. İnce barsaktaki nodüllerin ve striktürlerin gerilediği görüldü. Çekumdaki kitlenin devam etmesi nedeniyle sağ hemikolektomi uygulandı. Bu tür vakalarda erken tanı ve anti-tüberküloz tedavisinin, onarımı ve anastomoz iyileşmesini kolaylaştıracağı bilinmelidir. İleoçekal kitlelerde tüberküloz belirtisi olmasa dahi, tüberkülozun ayırıcı tanıda akılda tutulması gerekir.

Anahtar Kelimeler: İntestinal perforasyon; tüberküloz; karın ağrısı

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Tuberculosis is a serious public health problem which causes a significant mortality rate in undeveloped countries. Its incidence is advancing due to increased HIV infection and immune-suppressive treatment result from migration in developed countries.¹ Tuberculosis may involve in lungs as well as in many other areas of the body (abdomen, peritoneum, intestines, etc.).

Intestinal tuberculosis may be primary or secondary. The secondary form is associated with lung. It is more commonly seen in young adults dur-

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ing the second and fourth decades of life, and its incidence is similar in both genders.^{2,3} It is possible that whole of the intestines may be affected, but the most commonly affected area is the ileocecum.^{4,5} Tuberculosis Peritonitis is a rare form of tuberculosis. It is an insidious disease characterized by systemic symptoms (fever, lost of appetite and fatigue) and nonspecific abdominal pain.

Studies performed in endemic regions have shown that intestinal involvement frequently causes terminal ileum obstruction (~75%).⁶ However, it can be seen in the jejunum in children and individuals with impaired immune function.^{7,8}

In the present case presentation, we have reported tuberculosis that involved the ileocaecal valve and caused obstruction.

CASE REPORT

71-year old male patient applied to General Surgery Outpatient Clinic with a knife-like abdominal pain for two days. There was a gas and stool discharge and no nausea, vomiting, diarrhea or constipation. On the abdominal examination, acute abdomen signs were determined and direct radiography was obtained for suspected perforation. There was free-air under the diaphragm and we decided to perform an emergency surgery. His laboratory results were unremarkable except the increased WBC level (25.600 mm³). During the exploration, widespread pus and small intestine content were seen. There was a mass involved in the ileocaecal valve and two perforations about 1 cm in size located in 90 and 110 cm proximal of the ileum. Also, there were nodular lesions and strictures in almost whole of the small intestine. Mesenteric lymph nodes were enlarged. Small intestinal resection and Mikulicz ileostomy were performed to encompass the perforations. The acid-resistant bacilli (ARB) culture test was examined because of the presence of widespread nodules on lung X-ray. The result was positive (+++) Figure 1 so, anti-tuberculosis treatment was initiated. According to the pathology report, there were caseification granulomatous inflammation and intestinal tuberculosis. Figure 2 shows the granu-

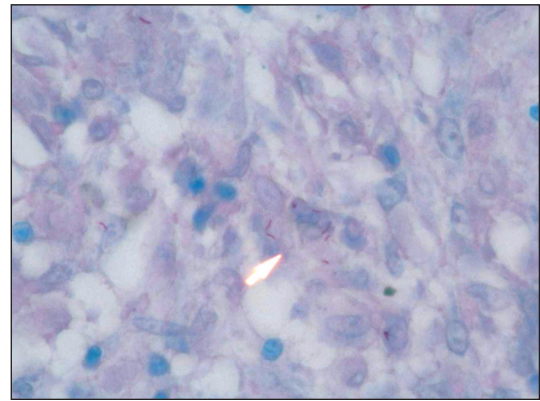


FIGURE 1: Acid-fast bacilli (Ziehl-Neelsen x 1000).

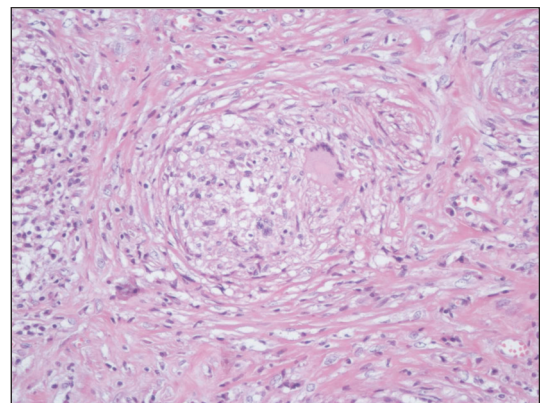


FIGURE 2: Granulomas composed of epithelioid histiocytes with Langhans type giant cells (HE x 200).

lomas composed of epithelioid histiocytes with Langhans type giant cells. The patients received tuberculosis treatment for 6 months, and control colonoscopy was scheduled. A mass was observed again in the ileocecal valve by the colonoscopy. Therefore, the patient was reoperated. Right hemicolectomy was performed. During the exploration, it was seen that nodules and strictures regressed in the small intestine. Postoperative wound healing was good. Oral feeding was initiated on the postoperative second day. The patient voided on the third day and he was discharged from the hospital on the fifth day.

DISCUSSION

Intestinal tuberculosis is a diagnostic dilemma because it mimics the symptoms of Crohn's disease, amebiasis, colon carcinoma and histoplasmosis.^{9,10}

The first-line investigations are colonoscopy and biopsy for definitive diagnosis. Linear ulcers, pseudopolyp, nodules and deformed cecum are typically seen on colonoscopy.¹¹ Our patient was applied with acute abdomen signs and perforation seen during the exploration. The diagnosis of the patient was confirmed by pathology following the intestinal resection.

Abdominal tuberculosis occurs in three major form; (1) Acidic form, (2) Obstructive plastic form and (3) Glandular form with mesenteric nodes. Rarely seen symptoms include stricture, fistula, nodule and associated conditions.¹² In our case, enlarged lymph nodes and a mass causing ileocaecal obstruction were determined. Also, there were widespread nodules and strictures in the small intestine.

Manifestations may emerge as acute, chronic or both acute and chronic symptoms. Fever (40-70 %), pain (80-95%), diarrhea (11-20%), constipation (11-20%), weight loss (40-90%), loss of appetite, acid, abdominal distension, night sweating and hematochezia are observed in most of the cases.¹³ In our

case, there was the abdominal pain, no diarrhea or constipation was reported. Acid or hematochezia was not determined by the examination.

In most of the cases, retarded inflammation results the masses caused obstruction, adhesion, and lymph node enlargement. Initial operation is performed by intra-abdominal irrigation and perforation control because of the advanced inflamed small intestine. In secondary laparotomy, it can be observed that multiple perforations proceed to jejunal segments.¹⁴ Since our case was delayed, there was widespread contamination so, the anastomosis was impossible, Therefore, Mikulicz ileostomy was performed. No secondary laparotomy was needed. After the anti-tuberculosis treatment, right hemicolectomy was applied.

As a conclusion, it should be remembered that early diagnosis and anti-tuberculosis treatment facilitate the improvement and healing of the anastomosis. Even if there is not tuberculosis sign in ileocecal masses, it should be considered for differential diagnosis.

REFERENCES

1. Akbar M, Fakhar-ul-Islam, Haider IZ, Naveed D, Akbar I, Khattak I, et al. Surgical management of tuberculous small bowel obstruction. *J Ayub Med Coll Abbottabad* 2010;22(2):171-5.
2. Coccolini F, Ansaloni L, Catena F, Lazzareschi D, Puviani L, Pinna AD. Tubercular bowel perforation: what to do? *Ulus Travma Acil Cerrahi Derg* 2011;17(1):66-74.
3. Michalopoulos A, Papadopoulos VN, Panidis S, Papavramidis TS, Chiotis A, Basdanis G. Cecal obstruction due to primary intestinal tuberculosis: a case series. *J Med Case Rep* 2011;5(1):128.
4. Aston NO. Abdominal tuberculosis. *World J Surg* 1997;21(5):492-9.
5. Sharma MP, Bhatia V. Abdominal tuberculosis. *Indian J Med Res* 2004;120(4):305-15.
6. Ohene-Yeboah M. Case series of acute presentation of abdominal TB in Ghana. *Trop Doct* 2006;36(4):241-3.
7. Dhar A, Bagga D, Taneja SB. Perforated tubercular enteritis of childhood: a ten year study. *Indian J Pediatr* 1990;57(5):713-6.
8. Acea Nebri B, Rosales Juega D, Prada Puentes C, Arnal Monreal F, Gómez Freijoso C. [Perforated jejunal tuberculosis in a patient with HIV-infection]. *Rev Esp Enferm Dig* 1998;90(5):369-71.
9. Sanai FM, Bzeizi KI. Systematic review: tuberculous peritonitis-presenting features, diagnostic strategies and treatment. *Aliment Pharmacol Ther* 2005;22(8):685-700.
10. Niaz K, Shraf M. Intestinal tuberculosis: diagnostic dilemma. *Professional Med J* 2010; 17(4):532-7.
11. Singh V, Kumar P, Kamal J, Prakash V, Vaiphei K, Singh K. Clinicocolonoscopy profile of colonic tuberculosis. *Am J Gastroenterol* 1996;91(3):565-8.
12. Chong VH, Lim KS. Gastrointestinal tuberculosis. *Singapore Med J* 2009;50(6):638-45.
13. Tanrikulu AC, Aldemir M, Gurkan F, Suner A, Dagli CE, Ece A. Clinical review of tuberculous peritonitis in 39 patients in Diyarbakir, Turkey. *J Gastroenterol Hepatol* 2005;20(6): 906-9.
14. Talwar S, Talwar R, Prasad P. Tuberculous perforations of the small intestine. *Int J Clin Pract* 1999;53(7):514-8.