Colonic Tuberculosis Mimicking Ascending Colon Neoplasm: A Case Report

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ABSTRACT

Tuberculosis is still a worldwide public health concern especially in developing countries. Extrapulmonary tuberculosis including abdominal tuberculosis is known as the great mimicker and usually delayed due to its nonspecific clinical presentation. A 30 years old male patient presented to our hospital with 5-months history of persistent lower right-sided abdominal pain, anorexia, and weight loss. Computed tomography scan of the abdomen suggested malignant mass of ascending colon. Chest x-ray showed suprahilar right lung fibro-infiltrates suggested lung tuberculosis. Colonoscopy was performed which revealed tumor of the hepatica flexure. Biopsy was taken from colonoscopy showed non-specific colitis results. Surgery was performed due to suspicious of ascending colon malignancy. Histopathological evaluation of colon biopsy revealed features of caseating granulomas and Langerhans giant cells that consistent with tuberculosis. A diagnosis of colonic tuberculosis was concluded and the patient is treated with anti-tuberculosis drug regimens.

Keywords: Abdominal, colon, tuberculosis.

I. INTRODUCTION

Tuberculosis is still a major health problem in Indonesia during more than last 20 years with high morbidity and mortality. Indonesia is in the third highest tuberculosis incidence after India and China with estimated cases 824,000 and 93,000 deaths per year [1]. Tuberculosis can distribute widely to organ system of the body resulting in extrapulmonary tuberculosis represented for about 14% of tuberculosis cases worldwide in 2017 [2]. Extrapulmonary tuberculosis that manifest as abdominal tuberculosis is only 1-3% of all tuberculosis cases worldwide but untreated abdominal tuberculosis carries significant mortality rate of 60% [3], [4]. There are few reports in the literature describe prevalence of colonic tuberculosis, nevertheless Indonesia is country with third highest tuberculosis burden [5]. Here we report a case of colonic tuberculosis mimicking as ascending colon neoplasm.

II. CASE PRESENTATION

A 30-year-old male presented to the hospital with history of persistent lower right-sided abdominal pain, anorexia, and weight loss for about 5 months. In the past 2 months, he had lost around 5 kilograms weight. Clinical symptoms like chronic cough, hemoptysis, fever or night sweat were not found. The patient had history of appendectomy in the past 5 months and the abdominal pain was persistent after the surgery. He had no past history of tuberculosis or cancer. He denied history of close contact with tuberculosis patient in his family. History of malignancies in his family was also denied. He was an active smoker for at least 10 years.

Initial vital signs of the patient were stable. Abdominal examination revealed tenderness on the lower right quadrant of abdomen with solitary abdominal mass was palpable. No peripheral edema was observed. Chest examination was within normal limit. Laboratory test showed slight leukocytosis and other laboratory tests were normal. Carcinoembryonic Antigen Test (CEA) as tumor marker of adenocarcinoma was not detected. Computed tomography scan of the abdomen with contrast showed heterogenous enhancing circular thickening intra-lumen of ascending colon with significant fat stranding around ascending colon and multiple enlarged lymph node of pericolic, ileocolic, right colic, middle colic, suggested

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malignant mass. Therefore, colonoscopy was performed which revealed tumor of the hepatica flexure. As the endoscope could not pass through the hepatic flexure, the procedure was stopped. Biopsy was taken from colonoscopy. However, the features showed non-specific colitis results. Then, surgery was performed due to suspicious of ascending colon malignancy.

The patient underwent exploration laparotomy which showed adhesion of the omentum on the liver surface and a mass in the ascending colon segment measuring about 4x3 cm. Right hemicolecotomy was performed with an ileo-transverse anastomosis. Sample of abdominal cavity pus was sent for bacterial culture which showed no specific bacterial growth was found (flora normal). Histopathological evaluation of colon biopsy was taken with result features of caseating granulomas and Langerhans giant cells that consistent with tuberculosis. No evidence of malignant cell was observed. Then, the pathological anatomy report conclusion diagnosis of colonic tuberculosis based on these findings.

The patient treated with anti-tuberculosis drug regimens category 1 intensive phase HRZE for next 2 months, continued by four months of isoniazid and rifampicin therapy. Patient was discharge due to improvement after surgery and scheduled for outpatient visit. Patient report improvement after approximately six months of anti-tuberculosis treatment.

III. DISCUSSION

Abdominal tuberculosis infection still often a diagnostic challenge for clinicians worldwide, especially if they do not have any risk factors for tuberculosis infection. Abdominal tuberculosis is known as the great mimicker and usually delayed because of its nonspecific clinical presentation. Manifestation of abdominal tuberculosis show similarities to other gastrointestinal disorders such as Crohn’s disease and malignanacies [5].

Abdominal pain (80.6%) is the commonest complaints found in abdominal tuberculosis, followed by weight loss (74.63%), poor appetite (62.69%), fever (40.3%), loose stools (16.42%) and alternate constipation and diarrhea [6]. Radiological findings can mimic inflammation, infection or malignancy [7]. In this case patient came with features of malignancy such as abdominal pain, mass of abdomen and weight loss. Clinical symptoms of pulmonary tuberculosis like chronic cough, hemoptysis, fever or night sweat were not found. Patient denied history of close contact with tuberculosis patient in his family. A study by Rinaldi et al in Indonesia also conveyed that the patient with abdominal tuberculosis are varies in symptoms that consisted of abdominal pain, mass, ascites and weight loss [5]. History of close contact with infectious patients with tuberculosis may not be evident in all patients. Consequently, abdominal tuberculosis needs to be considered even in the absence of family history.

Abdominal tuberculosis is difficult to known at the first. Malignancy and inflammatory bowel disease is common mimics abdominal tuberculosis in the middle aged. Patient is usually misdiagnosed as carcinoma because of manifestation findings. The rate of misdiagnosis can be observed as high patient, he was misdiagnosed as ascending colon neoplasm at the first. CT scan and colonoscopy was not sensitive to differentiate between abdominal tuberculosis and malignancy. Culture of M. tuberculosis using abdominal mucosal tissue specimen is a gold standard examination for abdominal tuberculosis. The specificity is very high, but the
sensitivity value is only 9.3% and it requires 3-8 weeks for the result [8]. To distinguish between tuberculosis and carcinoma, findings of specific inflammatory process on histopathological examination is needed [9], [10]. In this case, we found features of caseating granulomas and Langhans giant cells on the histopathological examination of the colon that consistent with tuberculosis.

The most affected site of abdominal tuberculosis is ileoceleal region, which reaches around 64% of the incidence gastrointestinal tuberculosis, followed by jejunum [11]. It can occur as primary infection in the gastrointestinal without pulmonary involvement. The main reasons for predilection of ileo-caecal as the most affected site region of abdominal tuberculosis are due to combination of factors in this region such as relatively physiological statis (allowing absorption of organism), absorptive transport mechanisms, a narrow lumen with many lymphoid tissues, minimal digestive activity, and neutral pH environment that allow swallowed mycobacterium to be absorbed [11]. In this case, abdominal tuberculosis found in the colon region that was not common affected site of abdominal tuberculosis. Mycobacterium tuberculosis reaches the gastrointestinal tract by mechanism such as ingestion of bacilli tuberculosis in sputum, hematogenous spread from distant focus, lymphatic spread through infected nodes, and direct spread from adjacent organs [12].

Standard anti-tuberculosis therapy is effective for the treatment of colonic tuberculosis. The first choices management for abdominal tuberculosis is anti-tuberculosis drugs with the same composition as for pulmonary tuberculosis. Colonic tuberculosis responds well to standard anti-tuberculosis drugs [11]. Conventional anti-tuberculosis consists of two months intensive phase of isoniazid, rifampicin, ethambutol and pyrazinamide followed by four months combination of isoniazid and rifampicin [13]. Colonoscopy follow up should be conducted after completing anti-tuberculosis treatment [14], [15].

IV. CONCLUSION

Despite the current availability of diagnostic tools and treatment, tuberculosis is still a worldwide public health concern. Manifestation of abdominal tuberculosis is nonspecific with a wide spectrum of clinical presentation. Abdominal tuberculosis should always keep in mind as possible differential diagnosis of abdominal mass, particularly in developing countries with high incidence of the disease.

CONFLICT OF INTEREST

Authors declare that they do not have any conflict of interest.

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