Omental tuberculosis (TB) is a rare disease which can mimic Gastrointestinal malignancies: A case report

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**A B S T R A C T**

**INTRODUCTION:** Omental tuberculosis is a rare disease which can mimic Gastrointestinal malignancies. It should be considered as one of the differential diagnosis when the patient presents with abdominal mass with vague symptoms. Histological diagnosis is the final conclusion in these patients.

**PRESENTATION OF CASE:** An elderly male patient who presented with epigastric pain with epigastric mass and diagnosed with omental tuberculosis as a result of USS guided tissue biopsy revealed granuloma with central caseous necrosis. The size of the mass completely resolved after completion of anti TB treatment in this patient.

**DISCUSSION:** Presence of caseous necrosis with granulomas in histology and positive culture of tuberculosis from tissue are the definitive diagnosis for omental tuberculosis. And the response to treatment with anti TB drug supports the diagnosis.

**CONCLUSION:** Omental TB is a rare entity which can be misdiagnosed as GI malignancies. Medical management is the treatment of choice for omental TB. Surgery is needed when complications occur in extrapulmonary TB.

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1. Introduction

Tuberculosis (TB) is a chronic granulomatous disease caused by Mycobacterium Tuberculosis. In 2015, WHO estimates around 13,000 all forms of TB cases in Sri Lanka [1]. In 2015, 2699 extrapulmonary TB cases notified to NPTCCD, TB primarily affects the lungs but it may affect any other organs (Extrapulmonary). The commonest extrapulmonary site is lymphatic system followed by pleura [2]. The poor socio-economic condition, malnutrition, chronic diseases and immunodeficiency are the main predisposing factors to TB.

Tissue biopsy and tissue aspiration cytology are useful to diagnose the extrapulmonary TB. Granulomatous inflammation with central caseation with lymphocytes, epithelioid cells and Langerhans cells infiltration are characteristics in histological features in TB. Direct smear for AFB and cytology from tissue aspirates also useful in diagnosis [1]. The Omental tuberculosis can mimic symptoms of gastrointestinal malignancies and also both share similarities in radiological appearance in imaging.

Isoniazid (H), Rifampicin (R), Pyrazinamide (Z), Ethambutol (E) and Streptomycin (S) are used as first line anti TB drugs. Treatment for extrapulmonary TB is two months of intensive phase with anti TB drugs of HRZE followed by four months of continuation phase with anti TB drugs of HR [1]. Surgery is needed when complications occur in extrapulmonary TB.

2. Case report

81-year-old previously healthy man presented with epigastric pain, dyspeptic symptoms, vomiting, loss of appetite and weight loss for six weeks duration. There is no contact history of TB. The examination revealed a doughy mass in the epigastric region and all other systems including general examination to be normal. He was investigated in Teaching hospital professorial surgical unit, Jaffna.

Blood investigations, full blood count, renal function and liver function were within normal limits except erythrocyte sedimentation rate (ESR) was 88 mm / 1st hour.

His chest X ray was normal. Ultrasound scan of abdomen revealed suspicious omental mass in epigastric region. Enhancing mass lesion was reported in CECT abdomen of this patient which was located in the mesentery of left hypochondrium and appeared to be infiltrating anterior abdominal wall. The upper GI endoscopy revealed mild antral gastritis and colonoscopy was unremarkable (Fig. 1).

The USS guided core biopsy of the lesion done by radiologist and its revealed granulomatous inflammation of fibrofatty tissues with highest possibility of omental tuberculosis (Fig. 2).
Then he was referred to the Chest clinic and anti TB treatment was started (2 months HRZE then four months HR). The mass resolved completely at completion of six months of anti TB treatment.

3. Discussion

Extrapulmonary TB primarily affects the lymphatic system followed by pleura. Omental tuberculosis is a rare condition accounts for less than 1% of tuberculosis cases [3]. The mode of dissemination usually by lymphatic, hematogenous and direct invasion from adjacent tissues in extra pulmonary TB.

Fever, weight loss, abdominal pain, abdominal distension (ascites), palpable abdominal mass and night sweats are the symptoms of omental tuberculosis. This patient presented with epigastric pain, weight loss, loss of appetite and palpable mass in epigastrium. These symptoms mimic the symptoms of GI malignancies.

Presence of caseous necrosis with granulomas in histology and positive culture of tuberculosis from tissue are the definitive diagnosis for omental tuberculosis. And the response to treatment with anti TB drug supports the diagnosis [4]. In our case, USS guided core biopsy revealed granulomatous inflammation of fibrofatty tissues and response to anti TB treatment derives diagnosis of omental TB. Adenosine deaminase (ADA), ESR and TB PCR are useful in diagnosis of Tuberculosis.

Medical management is the treatment of choice for omental TB. Six-months regime with Rifampicin, Isoniazid, Pyrazinamide & Ethambutol is the treatment for omental TB like as pulmonary TB [1]. In this case two months of intensive phase with anti TB drugs of HRZE followed by four months of continuation phase with anti TB drugs of HR was given. The mass resolved completely at completion of six months of anti TB treatment.

Surgery is needed when complications of omental TB evolve such as intestinal obstruction, intestinal perforation and intra omental abscess which cannot be drained radiologically [1].

This work has been reported in line with the SCARE 2018 criteria [5].

4. Learning points

Omental TB is a rare entity which can be misdiagnosed as GI malignancies. However, laboratory, radiological, microscopic and histopathological findings help in differentiating these two conditions. Medical management is the treatment of choice for omental TB. Surgery is needed when complications occurs in extrapulmonary TB.

Declaration of Competing Interest

The authors report no declarations of interest.

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Ethical approval

This study is exempt from ethical approval.

Consent

Informed written consent was obtained from the patient for publication of this case report and accompanying images. A copy of written consent is available for review by the Editor-in-Chief of this journal on request.

Author contribution

This patient was diagnosed and followed in our unit.

Guarantor

Dr. S. Raviraj.

Provenance and peer review

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