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Case Report

An Interesting Case of Peripancreatic Pancreatic Mass

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Abstract

We hereby present a case of Gastroduodenal tuberculosis in an immunocompetent patient in the absence of pulmonary involvement. A 73-year-old female patient of Indian origin had presented to us with complaints of loss of appetite, bodyache, weakness, giddiness, nausea, acidity, constipation and weight loss (5-6 kgs in the past month) and low-grade intermittent fever for 3 months.

An Abdominal Lymph node biopsy was done in view of PET CT findings. Peripancreatic lymph node biopsy was the hallmark for the diagnosis of the disease, which revealed granulomatous inflammation consistent with tuberculosis. Gastrointestinal tuberculosis presenting with abdominal lymphadenopathy is an infrequent entity. This case proves to be unique, as our patient, in the absence of pulmonary tuberculosis, had experienced primary GastroDuodenal Tuberculosis. This case elicits the importance of a prompt diagnosis and need of quick management in an unusual case of primary duodenal tuberculosis disease .

Keywords: Tuberculosis; Peripancreatic Mass; Biopsy

Introduction

About 1/3rd of the world's population is currently suffering with Tuberculosis (TB) according to the World Health Organization, with 1% of new cases occurring each year. If not diagnosed promptly and not treated accordingly, it can become a life-threatening disease. Nevertheless, tuberculosis is treatable and more importantly, preventable. Gastrointestinal tuberculosis can usually affect any region of the gastrointestinal tract, but the most common site is the ileocecal region. The duodenum is quite an unusual site for tuberculosis. Duodenum, if involved, usually occurs due to secondary spread from pulmonary disease. We present a case of primary gastrointestinal tuberculosis in the absence of any pulmonary involvement, being treated with antitubercular therapy emphasizing the need of high suspicion to diagnose tuberculosis and subsequently early initiation of antitubercular drug therapy in such patients.

Case Presentation

A 73 year old female, resident of Mumbai, homemaker by occupation, a known case of Diabetes Mellitus and Hypertension on medication, came to the hospital with complaints of loss of appetite,

bodyache, weakness, giddiness, nausea, acidity ,constipation and weight loss (5-6kgs in the past month) and low grade intermittent fever since 3 months. Patient was initially admitted in a different hospital for persistent thrombocytopenia. However, no history of similar complaints in the past.

Initially on examination cervical lymph nodes were palpable hence CT chest and neck with CT abdomen and pelvis was done which showed diffuse small airway disease, subcentimeter sized mediastinal nodes and level 2/5 cervical lymph nodes. There was a suspicion of Infectious Mononucleosis hence its panel was sent which was positive for viral capsid antigen for Epstein-Barr virus, Viral capsid antigen urea, viral capsid antigen IgG, Early IgG (EA-D) and (EBNA) nuclear antigen IgG and was treated with azithromycin. All routine investigations were sent along with peripheral smear which showed mild microcytosis, anisocytosis, ovalocytes, tear drop cells, reduced platelet count 45,000, WBC count 6180 with 10% band forms. Immature Platelet Fraction and retic count within range. Serum Iron studies were suggestive of iron deficiency anemia. A bone marrow aspiration/biopsy for cytogenetic and molecular tests was done which came out to be normal. A Whole Body PET Scan was advised suggestive of: Thorax (with HRCT): FDG avid few discrete subcentimeter sized mediastinal lymph nodes are seen in pre and paratracheal, AP window, prevascular, subcarinal, azygoesophageal and right hilar regions.

Abdomen: periportal - peripancreatic, portocaval, splenic hilar and left para aortic lymph nodes seen with the larger periportal - peripancreatic node measuring about 3.1 x 1.3cmwithSUVmax 19.2.

In view of PET CT findings a decision was made to perform a laparoscopic abdominal lymph node biopsy. During the surgery, a cystic lymph node was identified on the cystic artery and an attempt was made to dissect the same. Due to difficulties in dissecting and operating Intra-op, a decision was made to convert the surgical procedure to open. A large lymph node was found on the pancreatic head . A wedge biopsy of the lymph node was taken. The peripancreatic lymph node was sent for biopsy which came out positive for *Mycobacterium tuberculosis*. Hence, the patient was started on Antitubercular Drugs.

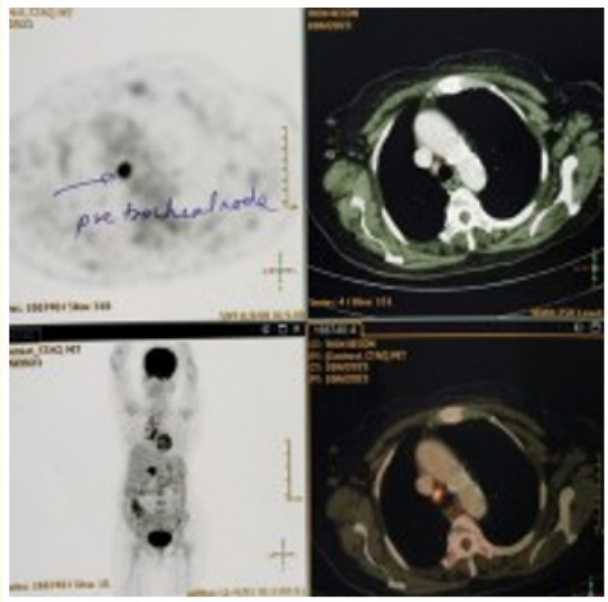

Figure 1: PET CT image showing enlarged lymphadenopathy in paratracheal region.

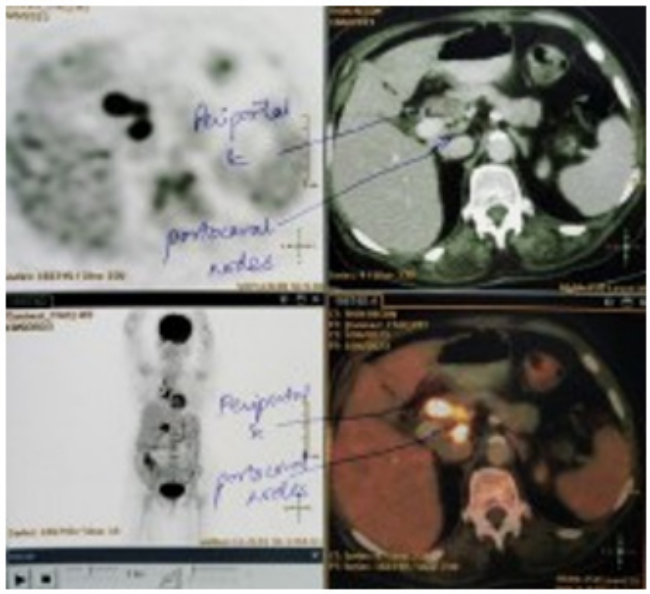

Figure 2: PET CT image showing enlarged lymphadenopathy in periportal and aortocaval nodes.

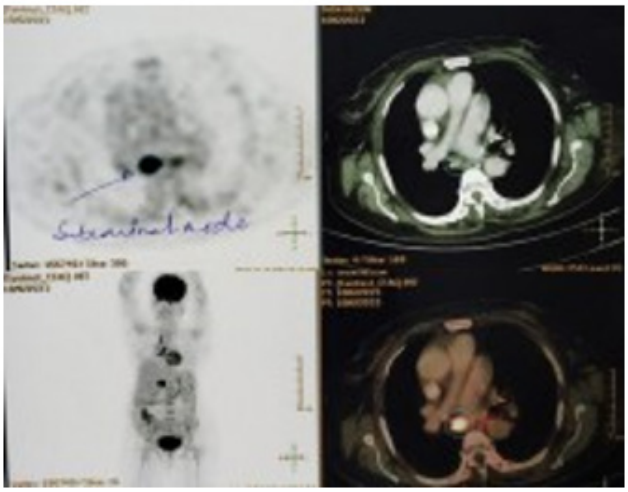

Figure 3: PET CT image showing enlarged lymphadenopathy of subcarinal nodes.

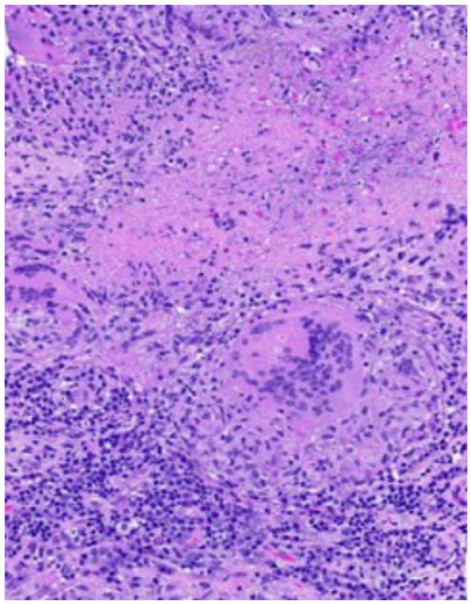

Figure 4: Histopathological section of pancreatic lymph nodes Granulomatous lymphadenitis with extensive caseousness consistent with tuberculosis.

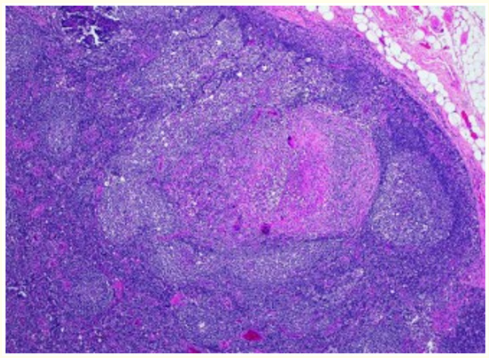

Figure 5: Histopathological section of pancreatic lymph nodes Granulomatous lymphadenitis with extensive caseousness consistent with tuberculosis.

Discussion

Tuberculosis is endemic in India. Pulmonary Tuberculosis is the predominant form of the disease, however extra pulmonary tuberculosis, in particular gastrointestinal tuberculosis, is relatively rare and hence neglected. Gastrointestinal tuberculosis without preexisting pulmonary tuberculosis is an unusual entity. The incidence of gastrointestinal tract involvement is relatively high in untreated or partially treated tuberculosis. Gastroduodenal tuberculosis is a rare and infrequent entity which often is underdiagnosed and mostly treated as refractory peptic ulcer disease.

Gastrointestinal tuberculosis is a relatively rare and uncommon form of Tuberculosis which involves infection of the peritoneum, abdominal organs and abdominal lymphatic system. The likely routes of infection could be a result of swallowing tubercle bacilli, directly invading the mucosa, lymphatic spread, extension from neighboring tuberculous lesions or hematogenous spread. In the gastrointestinal tract, the ileocecal region is the predominant site of involvement, followed by the ascending Colon, jejunum, duodenum, stomach, sigmoid colon, appendix and rectum. Involvement of stomach and duodenum is seen in approximately 1% to 2% of patients, in the cases of Gastroduodenal Tuberculosis. Probable causes for gastroduodenal sparing may be due to high acidity, rapid transit of food in the stomach and/or a paucity of lymphoid tissue. A long term therapy with proton pump inhibitors and/or H2 blockers leads to increased incidence of GD TB; however, our patient did not give any similar history.

A wide range of symptoms such as epigastric pain, vomiting, weight loss, hematemesis, perforations, gastric outlet obstruction or obstructive jaundice are associated with Gastroduodenal tuberculosis.

Gastroduodenal tuberculosis usually represents the worst end of the tuberculosis disease severity spectrum, with poorer treatment outcomes and prognosis. Inflammatory exudate produced by tubercle bacilli may spread along the mucosa or through the wall of the intestine and may result in subsequent involvement of adjacent lymph nodes leading to associated lymphadenopathies. Mucosa in the affected area becomes thickened and hyperplastic, but generally remains intact.

Severe and potentially life threatening complications of gastrointestinal TB include intestinal strictures, obstruction, perforation and bleeding. Duodenal involvement may be exogenous, internal, or both. The exogenous type usually presents with primary duodenal involvement or as compression due to enlarged periduodenal lymph nodes, while the endogenous type may show ulcerative, hypertrophic, or ulcerative hypertrophic lesions. Our case is distinctive and unusual as our patient had primary gastroduodenal tuberculosis in the absence of pulmonary tuberculosis in an otherwise healthy individual.

Having presented with chronic non specific symptoms that suggested infectious mononucleosis, she was subsequently diagnosed with enlarged adenopathies at various sites, consistent histologically with tuberculosis. Gupta., *et al*. described a similar case report of a patient of abdominal tuberculosis diagnosed histopathologically by biopsy of the duodenum, defining it as the hallmark of the disease. There are no specific clinical, radiological, and endoscopic features to diagnose Gastroduodenal Tuberculosis which results in a great challenge for the clinician in diagnosing the same. 60% to 70% of patients suffering from Gastroduodenal tuberculosis have evidence of tuberculosis elsewhere.

Our patients had extrapulmonary involvement (Cervical tuberculous lymphadenitis) and there was no colonic involvement. Chest imaging usually shows evidence of pulmonary In our patient chest X Ray was found to be normal. Thickening of the gastric or duodenal wall along with enlarged local lymph nodes, is often a peculiar finding on CT scan and may sometimes be the only clue to the diagnosis Gastroduodenal tuberculosis. Our patient had similar portal lymph nodes but there was no evidence of increased gastric or duodenal wall thickness. Upper GI endoscopy may reveal findings such as nodularities, ulcerations, thickening, fistulous opening, erythema and deformity involving the antropyloric region and duodenum. Endoscopic biopsies are positive approximately in only $1/3^{rd}$ of cases as tuberculous granulomas and are often submucosal and endoscopic biopsies do not include submucosa routinely.

From the biopsy material , acid fast bacilli are seldom recovered. Fine needle aspiration cytology may have a higher yield as compared to biopsy. In Recent studies which included using a combination of multiple endoscopic biopsies and endoscopic mucosal resections, granulomatous inflammation was demonstrated in 90% to 100% of patients, however Acid Fast Bacilli were rarely demonstrated. In our patient, along with epithelioid cell granulomas, Acid Fast Bacilli were found to be positive. When diagnosis of Tuberculosis is established, most lesions regress with appropriate antitubercular treatment and do not require excision. Our patient has responded well to the timely treatment and showed regression of the nodule and resolution of symptoms [1-24].

Conclusion

Duodenal tuberculosis is seldom seen in day-to-day clinical practice with only a few cases reported in the literature. However, if it does occur, it is commonly mistaken for peptic ulcer disease, Crohn's disease, or neoplasm, both clinically and radiologically. There needs to be a high index of suspicion of duodenal tuberculosis in patients presenting with ulcerative growth or gastric outlet obstruction features and nodularities in countries endemic for tuberculosis. Once diagnosed correctly, such patients can have good outcomes with timely administration of antitubercular therapy and only few require endoscopic or surgical interventions.

Conflict of Interest

The authors have no financial and personal relationships with other people or organizations that could inappropriately influence (bias) this submission.

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Ethical Approval

Written informed consent was obtained from the patient for publication of this case report and its accompanying images.

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