Original Research Paper

Volume-9 | Issue-8 | August - 2019 | PRINT ISSN No. 2249 - 555X

Pathology

KIKUCHI DISEASE OF THE MESENTRIC LYMPH NODES PRESENTING AS ACUTE APPENDICITIS

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ABSTRACT A 20 years old girl underwent laparoscopic appendicectomy with mesenteric lymph node biopsy for recurrent right iliac fossa pain of about 1 ½ months and ultrasonography showing enlarged mesenteric lymph node in right iliac fossa. Histopathological evaluation of excised nodes shows features of Kikuchi disease which was confirmed by immunohistochemistry. Kikuchi disease of mesenteric node is extremely unusual and can be misdiagnosed and treated for appendicitis or tuberculosis. We are describing an unusual case of Kikuchi disease of mesenteric nodes and discuss various aspects.

KEYWORDS : Kikuchi disease, necrotizing, lymph node

INTRODUCTION:

Kikuchi disease is a sub-acute necrotising regional lymphadenopathy. It was independently described by Kikuchi and Fujimoto et al in 1972(1). It is considered as disease of young adults with a slight female preponderance. This disease is more common in Asian population (2) and is usually found in the cervical lymph nodes. Kikuchi disease localized to the mesenteric lymph node is rare. Only few cases are reported in medical literature. Kikuchi disease of mesenteric lymph node can mimic acute appendicitis.

CASE REPORT:

A 20 years old girl presented with recurrent episodes of migratory right iliac fossa pain for past 1 ½ months, associated with anorexia and fever. There is no associated nausea, vomiting, abdominal distension or jaundice. There is no history of other comorbidities or drug allergy. She was not on any medication

On clinical examination patient was stable, no pallor, icterus, organomegaly or other lymphadenopathy. System examination was unremarkable. Per abdominal examination showed mild right iliac fossa tenderness, no rebound tenderness or guarding.

Laboratory investigations showed total leucocyte count 7600/cumm with 86% polymorphonuclear cell, platelet count of 2.8 lac/cumm, raised ESR of 75 mm/hr. Urine analysis showed no abnormalities. Serology for HIV was negative. USG showed significantly enlarged mesenteric lymph nodes are seen in right iliac fossa.

With the clinical diagnosis of acute appendicitis and nonspecific mesenteric lymphadenitis patient underwent laparoscopic appendicectomy with mesenteric lymph node biopsy. Appendix identified in the right iliac fossa was inflamed with enlarged mesenteric lymph nodes. Appendicectomy and mesenteric lymph node biopsy were performed.

On gross examination appendix was unremarkable. The five mesenteric lymph nodes were enlarged and larger one measures 2x1.3x0.6cm. Rest four each average measures 0.5x0.3x0.2cm. On microscopy histological features of Kikuchi lymphadenitis including complete effacement of architecture, extensive necrosis and marked karyorrhexis and histiocyte proliferation noted. Absence of polymorphous inflammatory infiltrates and granuloma. The appendix showed mild vascular congestion only without evidence of acute inflammation (figure 1).

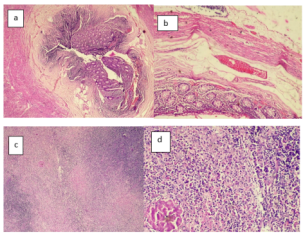

Figure 1: a) and b) appendix showing only vascular congestion; c) and d) sections from nodes showing complete effacement of architecture and patchy necrosis

Periodic acid shiffs and Gomori-methanamine silver stains were negative. Acid fast bacilli stain also were negative. Immunoh istochemistry for CD 68 and MPO was positive indicating histiocytes(figure 2). CD 20 and CD 8 shows scattered positivity indicating lymphocytes.

Recovery was uneventful and patient was discharged 3 days after surgery.

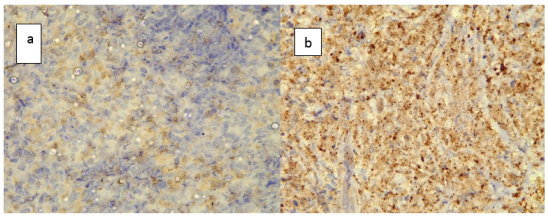

Figure 2: a) and b) shows CD68 and MPO show positivity for histiocytes

DISCUSSION:

Kikuchi disease is a benign self- limiting condition commonly seen in young women and usually presents with cervical lymphadenopathy and often associated pyrexia of unknown origin. The aetiology of Kikuchi disease is unknown (2).The common implicated cause is viral infection, even though bacterial and autoimmune causes are also considered.

The usual presentation is painful and tender cervical lymphadenopathy with associated fever, arthralgia and rash (3-5). The diagnosis is made by excision biopsy. Mesenteric lymph node involvement by the disease is rarely reported (6-8). The common presentation of mesenteric lymph node Kikuchi disease is with abdominal pain and commonly mimic acute appendicitis. Our case was that of a 20 year old female presenting with features of acute appendicitis.

The characteristic histological features of Kikuchi disease is patchy necrosis with marked karyorhexis. Histiocyte collections and absence of polymorphonuclear inflammatory cells will be present. The architecture of lymph node may be partially/completely effaced with intact capsule. In our case, completely effaced lymph node with characteristic features of Kikuchi disease were seen.

The main differential diagnosis included other necrotizing lesions like tuberculosis, Non- Hodgkin lymphoma, systemic lupus erythematosus and infections with toxoplasma gondii or Yersinia enterocolitica.

Tuberculosis have a caseating type granuloma formation with lymphocytic cuffing. Non-Hodgkin lymphoma may be confused with Kikuchi disease, but in Kikuchi disease, the reactive follicles and the mixture of lymphocytes and histiocytes exhibit non-malignant morphology. In systemic lupus erythematosus there will be prominent

infiltration of plasma cells and presence of hematoxylin bodies and neutrophils. Toxoplasma lymphadenitis show florid follicular hyperplasia and histiocyte collection in close proximity with reactive germinal centres. Yersinia infection shows presence of micro-abscess with neutrophils and eosinophils in germinal centre and granuloma formation.

The unusual location of lymph node involvement is a diagnostic challenge in Kikuchi disease. They usually present as multiple enlarged cervical lymph nodes and rarely as generalised lymphadenopathy. Rare sites include axillary, supraclavicular, mediastinal, inguinal, intraparotid, iliac, celiac and peripancreatic. Mesenteric lymph node involvement is unusual. Of the cases reported most of them has abdominal pain mimicking acute appendicitis and laparotomy for appendicitis identified enlarged mesenteric lymph nodes and taken for biopsy. And in most cases there is no evidence of appendicitis on histopathological examination.
The first differential diagnosis of a case of acute abdomen made is acute appendicitis. There are many conditions that mimic acute appendicitis. The common condition is mesenteric adenitis and others include infectous enterocolitis, urinary tract infection, renal stones, small bowel obstructions, cholecystitis and diverticulitis.

Kikuchi disease of mesenteric lymph node of the ileocaecal region is involved, clinical symptoms are similar to those of acute appendicitis as in many of the previously reported cases and in our case also. Although the incidence of Kikuchi disease in mesenteric nodes is rare, they should be considered in the differential diagnosis of acute abdominal pain mimicking acute appendicitis. We report this rare case of Kikuchi disease of mesenteric lymph node since this disease can be mistakenly diagnosed as tuberculosis and can underwent prolonged treatment for tuberculosis.

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