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RESEARCH ARTICLE

KIKUCHI'S DISEASE; A RARE BUT BENIGN CAUSE OF LYMPHADENOPATHY

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ABSTRACT

Kikuchi's disease also called histiocytic necrotizing lymphadenitis or Kikuchi-Fujimoto disease is an uncommon, idiopathic, generally self-limited cause of lymphadenitis. It is commonly seen in young females of Asian descent. It presents commonly with fever and tender cervical lymphadenopathy. Diagnosis is done by excisional biopsy and histopathological with sometimes immunohistochemical examination. Histopathologic features of lymph nodes in Kikuchi's disease are characteristic and permit differentiation of this benign condition from lymphomas, systemic lupus erythematosus and infectious lymphadenopathies like tuberculosis. Here we present a case of Kikuchi disease who responded adequately to conservative treatment.

Key words: Kikuchi disease, cervical lymphadenopathy.

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INTRODUCTION

The eponymously named Kikuchi's disease or histiocytic necrotising lymphadenitis is a benign self limiting cause of fever and tender cervical lymphadenopathy. There are reports of cases worldwide but the highest incidence is in Japan. The etiology is still unknown although autoimmune and post viral infectious causes are the most prevalent theory. There should be awareness of this disease as the initial clinical presentation mimics lymphoproliferative disorders and accurate diagnosis mitigates unnecessary evaluation and treatment.

Case presentation

A 32 year old male clerk presented by occupation presented to us with chief complaints of fever for 1 month. The fever was low grade, intermittent in nature. It was associated with cough with scanty mucoid expectoration. The patient was not known diabetic or hypertensive. There was no history of joint pain, rash, oral ulcer, shortness of breath, bleeding from any site; alteration of bowel habits, headache, or any significant weight loss. There was no history of similar or any major illness in the past. There was no history of similar or any major illness in his family. On personal history he is an occasional smoker, non-alcoholic. He had no history of promiscuous activity. His sleep and appetite was also normal. On examination the patient was alert, conscious, co-operative. Built was average with BMI of 24.9. Pallor, icterus, clubbing, cyanosis were absent. Pulse was 86/min, regular. Blood pressure was 120/70 mm of Hg. No significant skin, hair, nail changes were found. JVP was not elevated. He had bilateral, nontender non-tender cervical lymphadenopathy (1 node of size 1-2 cm on the left and 3 nodes of size 2-3 cm on the right.), firm in consistency, and smooth surface with matting. On examination of the gastrointestinal system there was 2 cm splenomegaly with sharp margin and firm consistency. Other systemic examinations were within normal limit. On routine investigations, Haemoglobin was 11.4gm/dl, Total leukocyte count-4730/dl, Platelet-1.8 lakh/dl and on differential count – Neutrophil54% Lymphocyte 31% Monocyte 3% Eosinophil 2% Activated lymphocyte 10%. ESR was 48 mm in 1st hour and MCV/MCH/MCHC were 84/27.3/32.8 respectively. Urea and creatinine were also normal -21mg/dl and 0.7mg/dl.LDH was elevated 773U/l and uric acid was 4mg/dl. Serum sodium was 129mEq/Lt and Potassium -4.9mEq/Lt. Liver function test revealed-Total bilirubin-0.6mg/dl, Direct bilirubin-0.2mg/dl,AST-222U/L,ALT 101U/L,ALP-64U/L, Total serum protein -6.0, albumin: globulin ratio 1.5:1. To detect source of fever urine sample was sent for routine and microscopy but no pus cells or micro-organism was found, only trace amount of albumin was detected. Chest X-ray was also normal. Dengue IgM antibody, MPDA , Hepatitis B surface antigen, Hepatitis C antibody, HIV ELISA were all negative. Ultrasonography of abdomen showed mild fatty change in liver and borderline splenomegaly. Mantoux test showed a reading of 10 mm. Sputum for acid fast bacilli was negative. A clinical diagnosis of a lymph proliferative disorder was thought of, but FNAC of cervical lymph node showed features of granulomatous inflammation but no evidence of necrosis or any acid fast bacilli. A bone marrow aspiration and biopsy was done which didn't show any significant pathological changes. A bone marrow BACTEC culture for Mycobacterium tuberculosis was

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also negative. So to reach a definite diagnosis lymph node biopsy was done which showed areas of necrosis containing karyorrhectic debris. The necrotic areas are surrounded by histiocytes, lymphocytes and plasma cells. Scattered immunoblasts are seen. No epithelioid granuloma found. AFB stain was negative. The impression was Necrotising lymphadenitis (Kikuchi's disease). The patient was treated symptomatically with paracetamol as and when required. The patient became afebrile after 3 days and was discharged. He is on regular follow-up for past 6 months and is totally asymptomatic. The lymph nodes also regressed over duration of 2 months. As lymph nodes of patients suffering from collagen vascular disease may mimic similar histological picture and also there is rare association between collagen vascular diseases and Kikuchi disease blood for antinuclear antibodies was sent which came out to be negative.

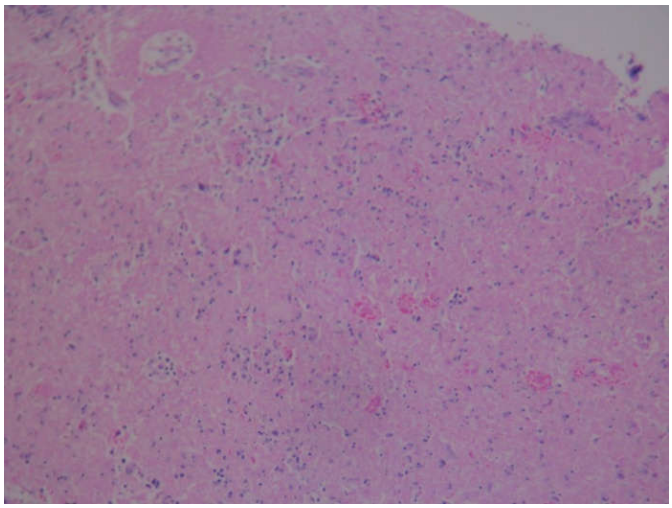

Figure1. Lymph node shows area of necrosis with karyorrhectic debris. The necrotic areas are surrounded by histiocytes, lymphocytes, plasma cells. Scattered immunoblasts are seen. No epithelioid granuloma seen

DISCUSSION

Kikuchi's disease known as subacute necrotising lymphadenitis, or histiocytic necrotising lymphadenitis was first reported independently but almost simultaneously by Masahiro Kikuchi and Y Fujimoto in 1972. Although exceedingly rare the prevalence is worldwide and among all ethnic groups with a higher distribution in South East Asia. Dorfman and Berry have reported 108 cases among which 68 were from US with 63% of them being white with a female preponderance initially postulated as 3:1. However with increasing awareness and reporting recent studies shows the ratio close to 1:1 commonly occurring in young adults rarely presenting below a age of 30 years (Lin *et al.,* 2003; Mosharaf-Hossain *et al.,* 2008). In India the first case was reported in 1998 by Mathew *et al.* The cause of Kikuchi disease is unknown, although infectious and autoimmune etiologies have been proposed. The most favored theory proposes that Kikuchi disease results when one or more unidentified agents trigger a self-limited autoimmune process. Lymphadenitis results from apoptotic cell death induced by cytotoxic T lymphocytes. Some human leukocyte antigen (HLA) class II genes are more frequent in patients with Kikuchi disease, suggesting a genetic predisposition to the proposed autoimmune response. Features that support a role for an infectious agent include the generally self-limited course of the disease and its frequent association with symptoms similar to those of upper respiratory tract infections (URTIs). Several viral candidates have been proposed,including cytomegalovirus,Epstein-Barr virus Human Herpes virus, Varicella-Zoster virus, Para influenza virus, Parvovirus B19, and Paramyxovirus. However, serologic and molecular studies have failed to link Kikuchi disease to a specific pathogen, and more than one pathogen may be the culprit. The common clinical manifestations are low grade fever with cervical lymphadenopathy. However other lymph node sites are involved in 2-40% patients but involvement of mediastinal, peritoneal and retroperitoneal regions is uncommon. Less frequent symptoms such as fatigue, arthralgia, nausea, vomiting, anorexia, and sore throat have been reported in 2-7% of patients. Weight loss and night-sweats, though rare, have also been observed. Extra-nodal involvement is seen in form of cutaneous manifestations in 16-40% of patients like rash, erythematous macules, patch and papules. Apart from these, malar erythema, oral ulcers, pruritus, alopecia, photosensitivity, conjunctival injection and scaling have also been observed in a small number of patients. Hepatic splenomegaly is relatively common; while neurologic involvement has been documented in form of isolated case reports of aseptic meningitis, acute cerebellar ataxia, and raised intracranial tension secondary to cervical venous obstruction. Systemic symptoms are found more frequently in patients with extra-nodal involvement (Sato *et al.,* 1999). Routine laboratory investigations are nonspecific except for elevated erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) and many patients have a low white blood count. Moreover, 25% to 31% of patients have atypical peripheral blood lymphocytes and leucocytosis may be seen also. Fine-needle aspiration cytology (FNAC) only has a limited role in establishing the diagnosis with the overall diagnostic accuracy estimated at 56%. Diagnosis is based on histopathalogical findings of a lymph node biopsy. Morphologically, it is characterized by irregular paracortical areas of coagulative necrosis with abundant karyorrhectic debris, which can distort the nodal architecture, and large number of different types of histiocytes at the margin of the necrotic areas.

The karyorrhectic foci are formed by different cellular types, predominantly histiocytes and plasmacytoid monocytes but also immunoblasts and small and large lymphocytes. Neutrophils are characteristically absent and plasma cells are either absent or scarce. The immunophenotype of Kikuchi's disease is primarily composed of mature CD8-positive and CD4-positive T lymphocytes. High rate of apoptosis is also seen among lymphocytes and histiocytes. The histiocytes express histiocyte-associated antigens such as lysozyme, myeloperoxidase (MPO) and CD68 which can be detected by immunohistochemistry. Plasmacytoid monocytes are also positive for CD68 but not for myeloperoxidase (Sudhakar *et al*., 2011; Bosch *et al.,* 2000; Sousa *et al.,* 2010). Other clinical conditions resembling the disease are tuberculosis, infectious mononucleosis, lymphoma, cat scratch disease, SLE, sarcoidosis, syphilis, tularaemia, toxoplasmosis, Kawasaki's disease, metastatic adenocarcinoma. The closest association is with SLE, in fact the disease has been recognised simultaneously and afterwards the diagnosis of SLE has been substantiated (Patra and Bhattacharya, 2013). Treatment is generally supportive. Nonsteroidal anti-inflammatory drugs (NSAIDs) may be used to alleviate lymph node tenderness and fever. The use of corticosteroids, such as prednisone, has been recommended in neurological involvement like ataxia or aseptic meningitis, hepatic involvement with raised LDH

levels, generalized disease. Jang *et al* recommended expanding the indications for corticosteroid use to less severe disease (Jang *et al.,* 2000). They administered prednisone when patients had prolonged fever and annoying symptoms lasting more than 2 weeks despite NSAID therapy, as well as for recurrent disease. Immunosuppressants have been recommended as an adjunct to corticosteroids in severe, life-threatening disease. Kikuchi' disease is a benign self-limiting condition with favourable prognosis. Lymphadenopathy usually resolves within 1-6 months after onset, although it may persist longer. About 3% of patients experience recurrence. In literature 4 deaths has been reported till date.

REFERENCES

Bosch, X., Guilabert, A. and Miquel, R. 2000. Campo E-Enigmatic Kikuchi-Fujimoto disease :a comprehensive review *Am J Clin Pathol.,* 122: 141-152.

Fujimoto, Y., Kozima, Y. and Yamaguchi, K. 1972. Cervical subacute necrotizing lymphadenitis: a new clinicpatho logical entity. *Naika,* 20:920-927.

Hudnall, SD. and Kikuchi-Fujimoto, 2000. disease. Is Epstein Barr virus the culprit AM *J Clin Pathol,* 113(6)761-764.

Jang, YJ., Park, KH. and Seok, HJ. 2000. Management of Kikuchi's disease using glucocortocoid. *J Laryngol Otol*., 114:709-711.

Kikuchi, 1972. M-Lymphadenitis showing focal reticulum cell hyperplasia with nuclear debris and phagocytosis: a clinicopathological study. *Acta Hematol Jpn*., 35: 379-380.

Lin, HC., Su, CY., Huang, CC., Huang, CF. and Chien, CY. 2003. Kikuchi's disease : a review and analysis of 61 cases. *Otolaryngol Head Neck Surg.,* 128: 650-653.

Mathew, LG., Cherian, T., Srivastava, VM. and Raghupathy P. 1998. Histiocytic necrotising lymphadenitis (Kikuchi's disease) with aseptic meningitis. *Indian Pediatric*, 35:775-777.

Mosharaf-Hossain, AKM., Dutta, PG., Amin, AS. and Jalaluddin M-Kikuchi- Fujimoto. 2008. disease presenting with fever, lymphadenopathy and dysphagia *Journal of Pakistan Medical Association,* 58:647-649

Patra, A. and Bhattacharya, 2013. SK-SLE, developing in a follow up patient of Kikuchi's disease: A rare disorder *J Clin Diag Res.,*7(4):752-753.

Sato, Y., Kuno, H., Oizuni K-Histiocytic, 1999. necrotising lymphadenitis (Kikuchi's disease) with aseptic meningitis. *J Neurol Sci.,* 163(2):187-191.

SOUSA, Alexandre de Andrade et al. Kikuchi-Fujimoto disease: three case reports. Sao Paulo Med. J. [online]. 2010, vol.128, n.4, pp.232-235. ISSN 1516-3180. http://dx.doi.org/10.1590/S1516-31802010000400011.

Sudhakar, M. K., Sathyamurthy, P., Indhumathi, E., Rajendran, A. and Vivek, B. 2011. Kikuchi's disease: A case report from south India. International Journal of Case Reports and Images, 2(2):15-18.

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