Case Report

Painful cervical lymphadenopathy: An unusual presentation of chikungunya

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Abstract

Chikungunya is an arboviral disease transmitted by Aedes mosquito that represents a major public health burden worldwide including India. The disease presents as sudden onset of high-grade fever, severe arthralgias, and rash. Here, we describe a case of a patient who presented with cervical lymphadenopathy, fever, and myalgia and later was diagnosed as chikungunya. Lymphadenopathy has been described before as a less common symptom of chikungunya. But this is probably, the first case of chikungunya with cervical lymphadenopathy as a presenting feature.

Key words: Arthralgia, chikungunya, cervical lymphadenopathy

Introduction

Chikungunya virus (CHIKV) is an arbovirus belonging to the genus Alphavirus which occurs widely in sub-Saharan Africa, India and many areas in Asia. The virus has not been active in India since 1973. The disease reappeared after 33 years in 2006, in the form of a large outbreak in India spread over 16 states including Goa. The numbers of suspected chikungunya cases in Goa are decreasing in number from 1429 cases documented in 2010 to 571 cases in 2012.[1]

The onset of chikungunya is usually sudden with high-grade fever, severe arthralgias, and skin rash. Other less common symptoms include headache, myalgia, vomiting, and lymphadenopathy.[2,3] The hallmark feature of CHIKV disease is an incapacitating arthralgia. The arthralgia is often symmetrical, migratory, polyarticular, and involves peripheral joints. The joint pain typically persists for weeks or months.[4,5]

Case Report

A 41-year-old male presented to the surgery outpatient department in Goa with a 2 day history of painful swellings on the left side of his neck with low-grade fever, malaise, and muscle pain of one day duration. There was no history of accompanying chills and rigor or rash. There were no ear, nose, and throat (ENT) or tooth complaints. There was no history of night sweats, loss of weight and loss of appetite. His past medical and family history was unremarkable. He had no history of tuberculosis (TB) or TB contacts. There was no recent history of foreign travel, insect bites, exposure to cats or other animals.

On presentation, his general condition was good, with an axillary temperature of 38°C. On physical examination, he had multiple lymph nodes located in posterior triangle of the neck; the largest being approximately 2 × 1.5 cm in diameter. The lymph nodes were tender, mobile and firm in consistency with a smooth surface. He did not have any other site of significantly enlarged lymph nodes. Thyroid gland was not palpable. ENT examination was normal. Physical examination revealed no other abnormalities. A cervical ultrasound scan confirmed the examination findings and also demonstrated few subcentimetric lymph nodes in the posterior triangle of the neck on right side. Abdominal ultrasound revealed no abnormalities. He was given a course of oral amoxicillin/clavulanate combination, antipyretics, analgesics and was reviewed at the end of a week. There was no change in the symptoms or size of the lymph nodal mass. Hence, a fine-needle aspiration
cytology (FNAC) was performed. But the cytological features were inconclusive.

The patient was referred to the medicine department with fever increasing to around 40°C. He was advised certain investigations and prescribed another course of antibiotic for 5 days. With this treatment, fever subsided but joint pains appeared after 2 days, first in the wrists and fingers followed by shoulders on both sides. The joint swelling was more at the wrist and fingers. Laboratory investigations revealed normal blood cell counts. The peripheral smear was normal without evidence of atypical lymphocytes. His erythrocyte sedimentation rate (ESR) was 18 mm/hr. Urine analysis and serum uric acid was normal. Search for malaria parasites, antinuclear and double-stranded DNA antibodies, and rheumatoid factor was negative. Serologic tests for hepatitis A, B, and C, human immunodeficiency virus (HIV) and syphilis were negative. The serology was negative for both dengue IgM and IgG antibodies (immunochromatography). The chikungunya IgM antibody was not detected by serum IgM ELISA. The purified protein derivative (PPD) test was negative. There was no evidence of focal lesion on chest radiograph.

After 5 days the lower extremity joints were involved with profound swelling and limitation of movement; the swelling being more at the ankle joint [Figure 1]. He also experienced severe degree of myalgia in the thigh region. Patient was started on non-steroidal anti-inflammatory drugs (NSAIDs) and local application of magnesium sulfate salt. With this treatment the swelling and pain significantly decreased. But the lymph node swelling on the left side persisted and one more lymph node swelling appeared on the right side [Figure 2]. Thus, an excision biopsy was performed, with removal of this enlarged cervical lymph node. Histopathological examination of biopsy revealed necrotizing lymphadenitis with reactive hyperplasia. There was no evidence of histiocytosis, tuberculoid granuloma, or malignancy. A diagnosis of chikungunya was made based on history elicited by the patient and clinical findings. The arthralgia and myalgia persisted for a total period of 3 months following acute infection.

Discussion

In our case, the initial clinical impression was to rule out streptococcal pharyngitis, viral respiratory infection, tuberculosis, leukemia, lymphoma, or infectious mononucleosis. But as arthralgia appeared, the diagnosis was more in favor of an arboviral disease. Incapacitating arthralgia, absence of skin rash and normal platelet count helped to rule out dengue.

A study conducted in Maharashtra in 2006 showed that 9% of the confirmed chikungunya cases had cervical lymphadenopathy. Another prospective multi-centric study conducted in India between 2008 and 2009 revealed that lymphadenopathy was rarely observed in chikungunya. The cervical lymphadenopathy was the presenting feature in our case probably because of the variability in patient’s response to infection. The accuracy of a serological test to diagnose chikungunya and dengue has been doubtful. Hence, diagnosis was made based on history and clinical findings.

There are two more diseases which have a presentation similar to the above-mentioned case. They are namely O’nyong-nyong (ONN) fever and Kikuchi–Fujimoto disease (KFD). ONN virus is serologically a member of the Semliki Forest virus antigenic complex closely related to CHIKV. ONN fever is caused by an alphavirus prevalent in central Africa characterized by low-grade fever, posterior cervical lymphadenopathy, symmetrical polyarthralgia, and a generalized skin rash. KFD is a disease of unknown etiology characterized by tender cervical lymphadenopathy and low-grade fever, more frequently reported in Asia. Definitive diagnosis of KFD can only be made on direct histopathological examination of a
lymph node biopsy. The typical features include lymph node necrosis with karyorrhexis surrounded by histiocytes, without granuloma, neutrophil, or plasma cell infiltration.[9] The fact that ONN virus is present only in Africa rules out ONN fever. The histopathological report goes against the diagnosis of KFD.

**Conclusions**

To the best of our knowledge, this is the first case of chikungunya that has presented as cervical lymphadenopathy. Since cervical lymphadenopathy is not a manifestation of a single disease, initial presentation provides a challenging obscurity of diagnosis. If the clinician does not suspect a disease due to an uncommon presentation then delayed diagnosis and unnecessary investigations can occur. Indiscriminate use of NSAIDs and antibiotics in viral diseases can lead to drug-related adverse events and increased cost of therapy.

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How to cite this article: Keny MS, Pereira IA, deSa SB, Gomes EJ. Painful cervical lymphadenopathy: An unusual presentation of chikungunya. Int J Appl Basic Med Res 2014;4:47-9.

Source of Support: Nill. Conflict of Interest: None declared.