Case Report

Nocardiosis presenting as generalized lymphadenopathy in an immunocompetent host

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Abstract

Nocardiosis is more prevalent in immunocompromised person but recent years has witnessed its increase incidence in immunocompetent host. In 90% cases primarily resulting in pulmonary Nocardiosis followed by brain, kidney and lymphocutaneous. Here we described a nine year old girl with generalized Lymphadenopathy who responds well with Co-trimoxazole.

Keywords: Lymphadenopathy, Nocardiosis

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Received Date: 12/12/2015 Revised Date: 16/01/2016 Accepted Date: 10/02/2016

Access this article online

Quick Response Code:

Website: www.medpulse.in

DOI: 14 February 2016

INTRODUCTION

Nocordiosis was once thought to be a rare cause of human disease but is being recognized more frequently and has been diagnosed in person from 4 weeks to 82 yrs of age .Although Nocardiosis is more prevalent in immunocompromised person like organ transplant recipient, chronic immunosuppressive therapy, cancer patient and those infected with HIV; the recent years have witnessed its increased incidence in healthy immunocompetent person[1]. Soil is the natural habitat of nocardia & it has been isolated throughout the world; with over 90% cases primarily resulting in pulmonary nocardiosis followed by brain, kidney and lymphocutaneous. The organism has been classified as a bacterium and placed in the Actinomyetaceae family, gram positive, strictly aerobic, variably acid fast, filamentous bacteria with a tendency to fragment into bacillary & coccoid forms[2]. Sulfonamides remain the first choice for chemotherapy but alternative drug like amoxicillin-clavulanic acid, gentamicin, amikacin and minocycline are effective[3]. Herein we describe a rare case of Nocardiosis with generalized Lymphadenopathy.

CASE REPORT

A nine year old female child was admitted with history of recurrent abdominal pain of one year duration and swelling in cervical, axillary, inguinal and submandibular region since past 10months. She had received antitubercular treatment for 6 months & underwent diagnostic laparotomy for recurrent abdominal pain without any relief for symptoms. On admission, child was pale (Hb-8gm%), total WBC count 8900/cu mm with eosinophil count 12%, ESR was 20mm at end of 1st hour. Peripheral smear showed normocytic normochromic RBCs with no malarial parasite. HIV antibody and HbsAg were negative. Ultrasound of abdomen showed multiple pre and paraaortic, mesenteric and aortocaval lymphnode enlargement of size 1.5 to 2cm in diameter. Liver spleen was normal. Computerized tomography of abdomen showed similar finding. Chest X ray was normal. Fine needle aspiration cytology from axillary and submandibular lymph node showed neutrophil rich inflammation and gram positive branched beaded filaments which were partially acid fast by modified acid fast stain hence suggestive diagnosis of nocardia. Blood culture was negative for nocardia. Histopathology of lymphnode showed similar finding as fine needle aspiration cytology with no evidence of tuberculosis.

How to site this article: Rajkumar M Meshram, S Abhisheik, Mukesh Waghmare. Nocardiosis presenting as generalized lymphadenopathy in an immunocompetent host. *MedPulse – International Medical Journal.* February 2016; 3(2): 203-204. http://www.medpulse.in (accessed 16 February 2016).

Patient was treated with oral Co-trimoxazole. The child was discharge with advice to continue treatment for next 3 months. The follow up over 6 months revealed complete resolution of Lymphadenopathy.

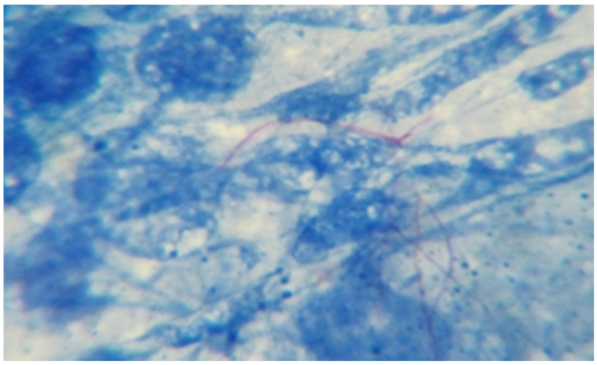

Figure 1: Showing long filamentous hair like acid fast bacilli

DISCUSSION

Nocardiosis was described for the first time in humans by Eppinger (1890) after Edmond Nocard (1888), a veterinarian noted an aerobic actinomycete in bovine farcy in cattle on the island of Guadeloupe[4]. Infection occurs in all ages even in early infancy to elderly and the male to female ratio is 3:1[5]. Nocardiosis is an acute, sub acute or chronic suppurative infection with a tendency to remission and exacerbation which is most commonly pulmonary followed by brain, kidney and lymphocutaneous. Our case presented with generalized lymph node involvement. Nocardiosis is chiefly an opportunistic infection particularly found in immunocompromised patient but in recent years many cases have been reported in immunocompetent individual similarly our case is also immunocompetent patient[2,6,7,8,9]. The diagnosis of nocardiosis as a cause of generalized lymphadenopathy is relatively low compared to common organism like tuberculosis. More ever nocardia is difficult to culture and there is no reliable serologic test to detect its presence. For making more accurate cause of generalized lymphadenopathy fine needle aspiration cytology is a key investigation for confirmation of diagnosis and our case shows acid fast long delicate hair like thin filamentous organism which shows branching . The soil is the natural habitant of nocardia & it has been isolated throughout the world[5], Our patient has history of eating nonedible substances like mud, clay and chalks and it may be a source of infection. Trimethoprim-sulfamethoxazole is the recognized drug of choice for treatment of nocardiosis. Primary lymphocutaneous nocardiosis may be curable after a course of 2-4 months, although several studies reported clinical cure of cutaneous nocardiosis after only2-3weeks. In patient with sulfa intolerance or those fail to sulfa therapy alternate drug like tetracycline, minocycline, amikacin, amoxicillin-clavulanic acid has been successfully use[2,5,7,10]. Our patient well responds to Trimethoprim-sulfamethoxazole for a period of three months. Although rare, nocardiosis must be considered as a rare cause of generalized lymphadenopathy in children.

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Source of Support: None Declared
Conflict of Interest: None Declared