Soft Tissue Tuberculosis: A Clinical Masquerader

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Introduction

Tuberculosis can infect any body organ from head to toe and if early measures are not taken it might result in devastating sequelae. Dissemination of this fatal disease to soft tissues is not a usual finding, a 12 year old female presented with severe right shoulder pain along with enlarged lymph nodes of the same side, the diagnosis was established after Acid Fast Bacilli (AFB) smear, culture & sensitivity. Anti-tubercular therapy (ATT) has shown favorable results. Thus, the case is presented with review of literature.

Case Report

A 12-year-old female Height 1.58 m and Weight 43 kilograms presented to the Infectious Disease Clinic at the Indus Hospital, Karachi on 10th June 2012 with history of moderate to severe right shoulder pain and enlarged right supraclavicular nodes which were gradually increasing for 4 months. She had daily fever 102-104F for 2 months, which was gradual in onset, and was not associated with chills and remained till morning. Previously she was started on ATT in Hyderabad on the basis of high Erythrocyte sedimentation rate (ESR) and suggestive history, but was not able to tolerate it well. Ultrasound guided thick pus aspirated from soft tissue around right shoulder grew smear and culture positive multisensitive Mycobacterium Tuberculosis (MTB). On her initial workups Hb level was found to be 10.9 mg/dl, Neutrophil Count was 10,100 /uL and lymphocyte count was 3900 /uL. She was registered and started on Anti-tubercular Therapy (ATT) on 2nd September 2012 with Category-1(CAT-1) i.e. four drug regimen (Isoniazid, rifampin, pyrazinamide and ethambutol). After a month of treatment and initial improvement new swellings started to appear in the neck, right axilla and a cold abscess began to form in the Right deltoid area. She was treated as Immune Reconstitution Inflammatory Syndrome (IRIS) with initially Ibuprofen 20 mg/kg/day for 2 weeks then Naproxen 260 mg/day for a month, but as the condition was not improving she was started on 20 mg/day of Deltacortil (Prednisolone). However the cold abscess became tense and was causing intense pain. On examination 3 pus exuding sinuses in right axilla were seen with a large tense, but not very tender cold abscess in front of the right arm. Small healing swellings on the side of the neck and suprasternal notch were also seen. Patient was admitted in Indus Hospital on 9th October 2012, where she was counseled and given Tramol 50 mg intravenously for adequate pain relief along with ATT. Ultrasound guided therapeutic drainage and aspiration via pig tail of her right upper arm cold abscess was also done. 900 ml of frank pus was drained which made patient comfortable and sample was sent to get Acid Fast Bacilli (AFB) smear, culture & sensitivity for Nocardia, Actinomycosis and Mycobacterium other than Tuberculosis (MOTT) done. Her GENEXPERT was also done to look for Rifampicin resistance and also to see if AFB are still alive or dead. Her AFB smear for pus was positive. Catheter was retained as pus was still draining at a rate of 50ml per 24 hours. Her GENEXPERT showed MTB detected medium and Rifampicin resistance was not detected. The patient was diagnosed as having Soft Tissue Tuberculosis. ATT was continued with Deltacortil 5 mg and Vitamin B6 (pyridoxine) 50 mg daily. The response to the treatment has been favorable. Catheter was retained for 6 days until frank pus was completely drained. During that time her daily cleaning of Right axilla was done with pyodine to prevent super-added staphylococcus infection of sinuses present there. Patient was discharged on 15th October 2012. She is continued with current ATT and Deltacortil with vitamin B6 and is being followed in the same clinic as Soft Tissue Tuberculosis patient.
Discussion

Tuberculosis (TB) is a major public health problem throughout the globe. Special consideration should be given to the developing region as it is endemic in most parts of it [1]. There was significant decrease in its incidence due to drug regimens followed but currently due to resistance it is now in resurgence phase [2]. Some of the factors that play role in its spread and prevalence in developing world are; immigration from countries with high prevalence; a growing elderly population, immunocompromised patients; multidrug-resistance; and various socioeconomic factors [3]. Evidence also suggests strong association with HIV-AIDS [4]. TB regardless of its origin can spread to distant organs mostly via haematogenous dissemination of mycobacteria or lymphogenous spread from a primary or reactivated focus of infection [5]. Sometimes it might be the result of direct inoculation of the organism into the site or reactivation of dormant infections via injuries [5]. These are the incidences or causes which result in rare but fatal sequelae known as SOFT TISSUE TUBERCULOSIS.

Treatment is basically medical no any surgical interventions are required; four drug regimen (isoniazid, rifampin, pyrazinamide and ethambutol) is used, with optimum duration and appropriate antibiotic [6]. TB should be immediately suspected in patients with unexplained tissue swelling and pain particularly if the patient is immunocompromised [7] or belong to an area where TB is endemic, and the treatment should be started without any delay. Most evidences are in support of its origin as a single focus [8], but the presentation of our case which shows multiple soft tissue involvement is suggestive of haematogenous or lymphogenous spread. Multi-tissue involvement is a rare finding, not many cases have been reported till date. Soft tissue involvement is generally a consequence of immunosuppressive therapy or injury [7]. Radiographic reports (Computed tomography (CT), Magnetic resonance imaging (MRI),) are playing significant roles in this regard, and thus, improving situation with promoting minimally invasive methods of investigations which have became the basis for diagnosis, thus, decreasing risk associated with maximally invasive techniques [9-11]. MRI is preferred for soft tissue like gastrointestinal or genitourinary tract. These radiographical techniques also help in understanding the stage of disease progression [12,13].

Conclusion

TB itself is stubborn and not very unchallenging to treat; its spread and involvement of distant organs make this situation little worse. That’s why proper treatment with early eradication of the disease is required in order to decrease burden due to its internal spread. In this regard proper screening techniques, early detection and diagnosis are necessary. There are some minor areas of concern which if dealt properly we can successfully fight and win battle against this giant enemy.

Disclosure

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References