

Case study

Childhood Cervical TB Lymphadenitis with Draining Sinuses: A report from high TB burden resource limited setting

Abstract

Though tuberculous lymphadenitis is the most common form of extra-pulmonary TB in children, it is usually overlooked as the main focus is on adult 'sputum positive TB'. This is especially relevant in tribal communities mostly living in inaccessible remote areas having poor access to health care facilities.

Comment [FCW1]: Give full meaning at first use

We are presenting here a case of bilateral cervical lymphadenitis with multiple draining sinuses – a fourteen-year-old girl belonging to the high TB burden Saharia tribe in Madhya Pradesh. She was detected through active TB case finding under the ongoing intensified TB control project in the area and was successfully treated as per NTEP guidelines. The delay in treatment seeking in the present case is a matter of concern.

Comment [FCW2]: Same as above

The findings highlight the importance of focussing on childhood TB especially in high TB burden communities from resource limited settings.

Key words: Extrapulmonary TB, Children, Lymphadenitis

Introduction

The childhood TB remains largely underreported in the [country]. In 2019, the childhood cases constitute 6.3% of the total notified 2.4 million cases in the country¹. This has serious consequences as about 50% of future adult cases can arise from a pool of undetected and untreated childhood cases². Tuberculous lymphadenitis is the most common form of extra-pulmonary TB (EPTB) in children with cervical lymph nodes as the most commonly affected group of nodes³. The diagnosis of TB lymphadenitis is however difficult and remains a challenge especially in resource poor settings.

Comment [FCCW3]: Specify the name of the country. Suggestionin

The case of TB lymphadenitis presented here is a 14-year-old girl from Saharia tribe in Madhya Pradesh and was detected through active TB case finding as part of the intensified TB control project being carried out in this tribe. Tuberculosis is a major health problem in Saharia with a high TB prevalence of 3294 per 100,000 population⁴. The present case highlights the importance of focussing on childhood TB especially in high TB burden communities from resource limited settings.

Case Presentation

The patient was detected through Intensified TB Control Project (ITCP) in Saharia tribe of Madhya Pradesh, which was focused on active case detection through the engagement of community volunteers. The project field supervisor along with community volunteers did the Active Case Finding survey, field supervisor observed a case with symptoms of multiple lymph node with whitish thick fluid started oozing. Field supervisor informed to his project scientist about the case then project scientist and District TB officer (DTO), visited patients' home. Project scientist took history of the patient from patient parents followed by informed written consent and in first observation DTO clinically confirmed EP TB. It was informed during history taking that this started with a small node on left side five years ago without any symptoms and remained untreated. A private practitioner was consulted three years back after multiple swellings occurred on both sides of the neck. She took treatment for 3-4 months but discontinued thereafter as there was no relief and also due to financial constraints. A local healer was consulted after the whitish thick fluid started oozing from the swelling. She took some herbal medicines for 7-8 months without any relief and discontinued again.

With the assistance from the project staff, she then got examined at the nearest health facility, the district hospital in this case. On examination, it was bilateral cervical lymphadenitis with multiple draining sinuses. The BCG scar was present. The purulent material was examined by smear microscopy for acid fast bacilli and was negative. Her blood sugar was within normal limits and she was HIV non-reactive. The purulent discharge was examined for *Mycobacterium tuberculosis* (MTB) by Cartridge based nucleic acid amplification test (CBNAAT) which confirmed MTB as drug sensitive tuberculosis. Her X ray chest showed right lower lobe infiltration. There was no past /family history of tuberculosis.

As per pediatric treatment guidelines of National Tuberculosis Elimination Programme (NTEP), she was put on daily directly observed treatment, shortcourse (Daily DOTS) for 6 months. The standardized treatment regimen was directly observed by a treatment supporter. She successfully

completed the full treatment. The CBNAAT test could not be done at the end of the treatment as there was no discharge from the swelling.

Discussion

Childhood tuberculosis indicate ongoing infection and highlights the performance of TB control activities in the area⁵. It is mostly considered non-infectious which may not be true as substantial yield of active TB disease is reported in EPTB contacts⁶. In addition, it is also associated with high long-term mortality [7]. Childhood TB thus assumes an important place in the overall child survival.

The case described in this report belongs to the Saharia tribe with high TB burden [4]. The severity of the problem can be seen from the fact that there are currently ten cases on TB treatment in this small hamlet of 360 population. A very high TB infection (20.4%) is reported among the children in this tribe [8]. However, the extent of active disease in children remains unknown in the community. The delay in treatment seeking in the present case is a matter of concern as the single node without pain was ignored. Later, the treatment from private practitioner and traditional healer discontinued due to financial constraints. Traditional healers like “Gunia” are usually consulted first in Saharia tribe. This highlights the community perceptions, attitudes and beliefs about the disease and the health seeking in general. As the literacy rate is lower, incorrect knowledge or myths, and misconceptions about TB disease and its medications and treatments are common. Hence it is important to create awareness about childhood TB, its symptoms and care seeking to avoid delay. Khan et al in a study from Pakistan have also reported the perceptions and beliefs related to tuberculosis [9]. The traditional healers usually form a part of the tribal society and are consulted being easily approachable and locally available. The discontinuation of treatment due to financial constraints highlight catastrophic cost associated with TB in this tribe in spite of free TB treatment available under NTEP. The “catastrophic” costs associated with TB are also reported in other setting [11].

The childhood TB especially TB lymphadenitis is usually overlooked as the main focus is on adult ‘sputum positive TB’. There is a need to give emphasis on childhood TB as well especially in high TB burden communities. Since obtaining sputum sample is difficult in children and also due to challenges in diagnosis of Extrapulmonary TB, it is sometimes difficult to confirm TB microbiologically. This is recognized in NTEP algorithm for Pediatric TB diagnosis and alternative modalities like X-ray, Tuberculin skin test and clinical interpretation are incorporated. As communities in rural and remote areas does not always seek for treatment in these cases the multipurpose health workers may be trained in identifying TB lymphadenitis in tribal areas. Awareness raising campaigns involving community leaders would be useful in educating children and the community on childhood tuberculosis.

Ethics approval:

The study has been approved by Institutional Ethics Committee (IEC) of ICMR-NIRTH, Jabalpur (No:NIRTH/IEC/2273 dated 25 October 2016). The parents of the patient have consented for the publication and authors are bound to protect the anonymity.

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Figure: Cervical lymphadenitis in a girl from tribal area



UNDER PEEI

“CW”

