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Editorial
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"T" For Tuberculosis, "T" For Tumour, "T" For Tension

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Abbreviations: MDR-TB: Multi-Drug-Resistant Tuberculosis; MRI: Magnetic Resonance Imaging; ESR: Erythrocyte Sedimentation Rate; XDR TB: Extensively Drug-Resistant TB

Editorial

Low back ache is one of the most common complain of patients reporting to any Orthopaedic outpatient department. After exclusion of post traumatic, osteopenic and inflammatory arthropathy for chronic back ache, the bulk of the etiology is either tuberculosis or anaplastics (metastasis being the most common anaplastic condition).In my country, due to the increased prevalence of Tuberculosis and the practical acceptance of trial first line Anti Tubercular Therapy, it is the first diagnosis that comes to our mind while anaplastic conditions are our last bet. More often than not, on getting the traid of constitutional symptoms, spondylodiscitis and raised ESR, we start trial first line ATT, forgetting that the features of TB and anaplastics may mimic each other. Only after failure to respond to trial first line ATT, we go for Gene Xpert test (for Drug resistance tuberculosis), biopsy (for tuberculosis or analytics) and tests for the work up of metastasis of unknown origin to check for Drug Resistance TB or anaplastics. The delay in the correct diagnosis and thereby the correct treatment, the lag period, may be long enough to worsen the prognosis of an anaplastic condition on one hand or to increase the emergence of drug resistance tuberculosis on the other.

The diagnosis of TB by history taking, clinical examination and imaging (X ray or MRI) has its own limitations as there is no pathognomonic finding on an MRI that reliably distinguishes tuberculosis from other spinal infections or from a possible neoplasm [1,2]. And, differentiating spinal TB from pyrogenic and fungal vertebral osteomyelitis as well as primary and metastatic spinal tumors may be difficult when only clinical and radiographic findings are considered [3,4]. Hence, Refinement of diagnostic criteria on MRI is also being done which concludes that a eight point MRI criteria of the vertebral lesions are likely to enhance the diagnostic ability of tuberculous and non tuberculous pathologies thereby reducing the dependency on histopathologic diagnosis or invasive method for early initiation of therapy [5]. MRC Trials on spinal tuberculosis and clinical practice over several decades have confirmed that in the regions where tuberculosis is prevalent, a clinical diagnosis supported by radiographs is adequate for starting the treatment, but, for cases not responding to chemotherapy, a biopsy may be required [6].

There is a definite need felt as per studies for a biopsy to be added routinely for the diagnosis of TB. In the absence of an abscess or bone fragments, image-guided biopsy is essential to establish the diagnosis [7]. The tissue obtained by percutaneous methods may not be sufficient for conclusive diagnosis. But, the absolute need for histological diagnosis in areas where the disease is endemic and facilities for biopsy and histopathology are scarce is still controversial [8]. There have been case reports of anaplastic conditions being diagnosed and treated as TB Spine [9-11]. MDR TB of the spine is a different disease and is here to stay with the imaging appearance becoming more complex with the onset of MDR TB [12,13]. The most important cause of the development of MDRTB is the patients receiving erratic, unsupervised second line drugs, added individually and often in incorrect doses, so giving a patient ATT without diagnosis actually increases the chances and spread of MDR, XDR TB [14].

The Xpert test has showed a sensitivity of 95.6% and specificity of 96.2% for spinal TB, available within 48 hours compared with a median of 35 days for cultures. It has also been used as an initial diagnostic test for TB detection and rifampicin resistance detection in patients suspected of having TB, MDR-TB, or HIV-associated TB with a good sensitivity and specificity. Developments in this gene testing are also going on by ways of Gene Xpert Omni and Xpert Ultra. The point we need to ponder

over is: can it be used as a routine first line test for diagnosis of spinal tuberculosis to include or exclude drug resistance tuberculosis?

We should not treat everything as TB. The correct diagnosis should be done before starting ATT. Literature recommends the use of biopsy and it is Safe, easy, reproducible, and has a high diagnostic yield. Also, it is always better to be medico legally safe. In today's day and age such a delay in the correct diagnosis is not acceptable and hence it is recommended not to be over dependant on imaging and on our bias towards TB, and anaplastics should be investigated by biopsy and other tests and ruled out at the onset rather than being a diagnosis of excusion (i.e. after exclusion of TB). Histopathology is important to exclude anaplastics and till anaplastics is not excluded we should not be sure it is TB because it should be borne in mind that failure to diagnose anaplastics is more dangerous than failure to diagnose MDR TB [15-17].

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