



T9 In a patient with coexisting pulmonary/systemic tuberculosis and a spinal lesion typical of TB, can drug therapy be started without Bone tissue biopsy and culture?



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# 3rd Meeting of the International Consensus Meeting 8-10 of May, 2025 Istanbul



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## Why is this topic Important

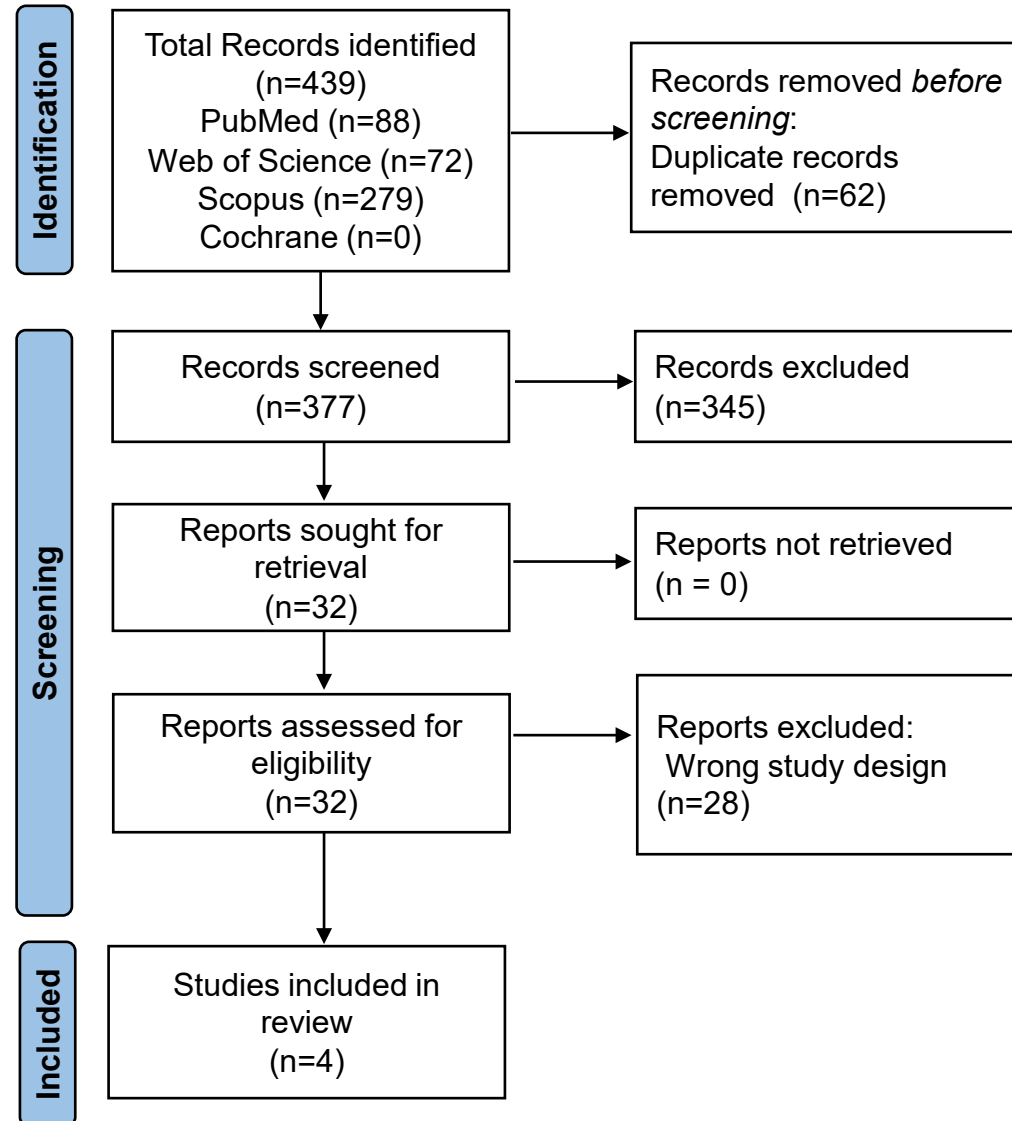
Often we encounter spinal lesion with co-existing systemic or pulmonary tuberculosis. Hence there is no consensus regarding the management protocol of the spinal lesion.



## Literature Review/ Process



Scopus





## Findings from Literature

- ❖ Spinal tuberculosis classically leads to destruction of the intervertebral disc and the adjacent vertebral bodies, leading to progressive collapse, kyphosis and neurological deficit. Although clinical presentation, MRI findings and laboratory reports are suggestive of tuberculosis, a tissue diagnosis is often necessary for a firm diagnosis<sup>1</sup>.
- ❖ Xpert MTB/RIF assay for early detection of *Mycobacterium* tubercular spondylodiscitis and Rifampicin resistance<sup>2</sup>.

1. Shetty, Ajoy Prasad, Rishi Mugesh Kanna and Shanmuganathan Rajasekaran. "TB spine—Current aspects on clinical presentation, diagnosis, and management options." *Seminars in Spine Surgery* 28 (2016): 150-162.

2. Arockiaraj J, Michael JS, Amritanand R, David KS, Krishnan V. The role of Xpert MTB/RIF assay in the diagnosis of tubercular spondylodiscitis. *Eur Spine J.* 2017 Dec;26(12):3162-3169. doi: 10.1007/s00586-017-5076-9. Epub 2017 Apr 8. PMID: 28391384.





## Findings from Literature

- ❖ It is important to note that in most cases, the doctor will not have a definite diagnosis at the beginning of the treatment. However, this should not delay the initiation of therapy. A delay in initiating treatment, in most cases, is directly associated with a poor prognosis<sup>3</sup>.
- ❖ In CNS-TB CSF formula typically shows a lymphocytic pleocytosis, and low glucose and high protein concentrations. Diagnosis rests on serial samples of CSF for smear and culture, combined with CSF PCR. Treatment is most effective when started in the early stages of disease, and should be initiated promptly on the basis of strong clinical suspicion without waiting for laboratory confirmation. The initial 4 drug regimen (isoniazid, rifampin, pyrazinamide, ethambutol) covers the possibility of infection with a resistant strain, maximizes antimicrobial impact, and reduces the likelihood of emerging resistance on therapy. Adjunctive corticosteroid therapy has been shown to reduce morbidity and mortality in all but late stage disease<sup>4</sup>.

3. Rodrigues MG, da Rocha AJ, Masruha MR, Minett TS. Neurotuberculosis: an overview. Cent Nerv Syst Agents Med Chem. 2011 Dec 1;11(4):246-60. doi: 10.2174/1871524911106040246. PMID: 22300226

4. Leonard JM. Central Nervous System Tuberculosis. Microbiol Spectr. 2017 Mar;5(2):10.1128/microbiolspec.tnmi7-0044-2017. doi: 10.1128/microbiolspec.TNMI7-0044-2017. PMID: 28281443; PMCID: PMC11687486.



## Findings from Literature

- ❖ Uncomplicated spinal tuberculosis is now a medical disease and can be effectively treated by multi-drug ambulatory chemotherapy and surgery is reserved for patients with instability, neurological deficit and prevention or correction of deformity<sup>1</sup>.
- ❖ The outcome following appropriate chemotherapy is generally good, with about 85-95% of patients showing improved outcome even when patients present with deformity and neurologic deficits<sup>1</sup>.

1. Shetty, Ajoy Prasad, Rishi Mugesh Kanna and Shanmuganathan Rajasekaran. "TB spine—Current aspects on clinical presentation, diagnosis, and management options." *Seminars in Spine Surgery* 28 (2016): 150-162.



## **Question:**

- ❖ **In a patient with coexisting pulmonary/systemic tuberculosis and a spinal lesion typical of TB, can drug therapy be started without Bone tissue biopsy and culture?**





## **Response:**

- ❖ **No, a site specific biopsy is still recommended In a patient with coexisting pulmonary/systemic tuberculosis and a spinal lesion typical of TB**



## ❖ **Vote:**

**Agree – 98.1%, Disagree – 1.9%, Abstain – 0%**  
**(Unanimous Consensus)**

❖ **Level of Evidence:** Low = Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.