



Effective Health Care

Osteoarticular Tuberculosis

Nomination Summary Document

Results of Topic Selection Process & Next Steps

- *Osteoarticular Tuberculosis* was found to be addressed by four systematic reviews, which are listed below. Given that these existing systematic reviews cover this nomination, no further activity will be undertaken on this topic.
 - Jutte PC, van Loenhout-Rooyackers JH. Routine surgery in addition to chemotherapy for treating spinal tuberculosis. *Cochrane Database Syst Rev* 2013; 5:CD004532.
 - Zhang X, Ji J, Liu B. Management of spinal tuberculosis: A systematic review and meta-analysis. *J Int Med Res* Oct 2013; 41(5):1395-1407.
 - Kim SJ, Postigo R, Koo S, et al. Total hip replacement for patients with active tuberculosis of the hip: A systematic review and pooled analysis. *Bone Joint J* May 2013; 95-b(5):578-582.
 - van Loenhout-Rooyackers JH, Verbeek AL, Jutte PC. Chemotherapeutic treatment for spinal tuberculosis. *Int J Tuberc Lung Dis* Mar 2002; 6(3):259-265.

Topic Description

Nominator(s): Individual

Nomination Summary: The nominator is interested in the effectiveness of strategies to control the spread of tuberculosis to the osteoarticular system, and to prevent and treat tuberculous spondylitis and arthritis. The nominator would like AHRQ to consider this topic in order to draw attention to the dangers of tuberculous infection if left untreated.

Staff-Generated PICO

Population(s): Patients in the US and other countries with osteoarticular tuberculosis (TB), including TB of the spine (i.e., Pott's Disease) and other bones or joints

Intervention(s): Pharmacological alone with long duration (9 months or more) (e.g., chemotherapy), pharmacological alone with short duration (less than 9 months), surgical and pharmacological (e.g., thoracoscopic decompression and chemotherapy), devices (e.g., external bracing), rehabilitation (physical therapy)

Comparator(s): Those listed above (i.e., compared to each other), any other intervention

Outcome(s): Control of infection, cure, complications, adverse events, functional status, deformities, and quality of life (QoL)

Key Questions from Nominator: What is the effectiveness of controlling the spread of TB infection and preventing tuberculous spondylitis and arthritis?

Revised Key What is the comparative effectiveness and safety of treatment options for patients diagnosed

Questions: with osteoarticular tuberculosis?

The nominator's key question was revised to focus on the treatment of osteoarticular TB rather than its prevention. Additionally, this topic was broadened to all osteoarticular TB.

Considerations

- Tuberculosis (TB) is a bacterial infectious disease caused by *Mycobacterium tuberculosis*. The disease is spread through the air from person to person. Thus, the disease usually affects the lungs first but can also infect other parts of the body, such as the central nervous system, the lymphatic system, genitourinary system and bones and joints. Osteoarticular TB is TB infection of any bones or joints and may account for up to 35% of cases of extrapulmonary TB. The common type of osteoarticular TB is spinal TB, also known as Pott's disease or tuberculous spondylitis, which accounts for 50% of all cases of osteoarticular TB. Osteoarticular TB generally occurs due to poor screening of the disease itself, delayed diagnosis of pulmonary TB, or suboptimal treatment of pulmonary TB.
- There is variation in chemotherapy treatment duration for individuals with osteoarticular TB. Surgery may be performed to treat complications. Understanding the optimal duration of treatment and the role of surgery in the acute phase of osteoarticular TB could inform management of individuals with this condition.
- Our search identified four systematic reviews, which cover this topic.
 - A 2005 Cochrane systematic review, titled *Routine surgery in addition to chemotherapy for treating spinal tuberculosis*, addressed the use of chemotherapy plus surgery versus chemotherapy alone for treating people with active TB of the spine. This review was updated in 2012.

One 2013 systematic review, titled *Management of spinal tuberculosis: A systematic review and meta-analysis*, focused on surgery plus chemotherapy vs. chemotherapy alone as the treatment for spinal TB. This review included two RCTs and one Cochrane review (identified above) published through December 2012.

One 2013 systematic review, titled *Total hip replacement for patients with active tuberculosis of the hip: a systematic review and pooled analysis*, evaluated the outcome of total hip replacement (THR) in patients with active TB of the hip.

One 2002 systematic review, titled *Chemotherapeutic treatment for spinal tuberculosis*, investigated the duration of chemotherapy for treatment in patients with spinal TB (six months of chemotherapy versus more than six months of chemotherapy).