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Sp28 - In a spinal tuberculosis patient with neurological deficit, how long can we wait for response with drug therapy before deciding for surgery?

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Why is this topic important

- Antituberculous therapy (ATT) remains the standard treatment for Pott disease, and the cure can be obtained in most patients, with a controlled standard ATT.
- Paraplegia and quadriplegia are some of the serious complications observed in approximately 10% of cases with spinal involvement
- To date, there is debate about the indications for surgery in spinal tuberculosis, including the degree of motor deficit that surgery would indicate.
- However, in patients for whom medical treatment is recommended despite the neurological deficit, what is the waiting period before deciding on surgery?

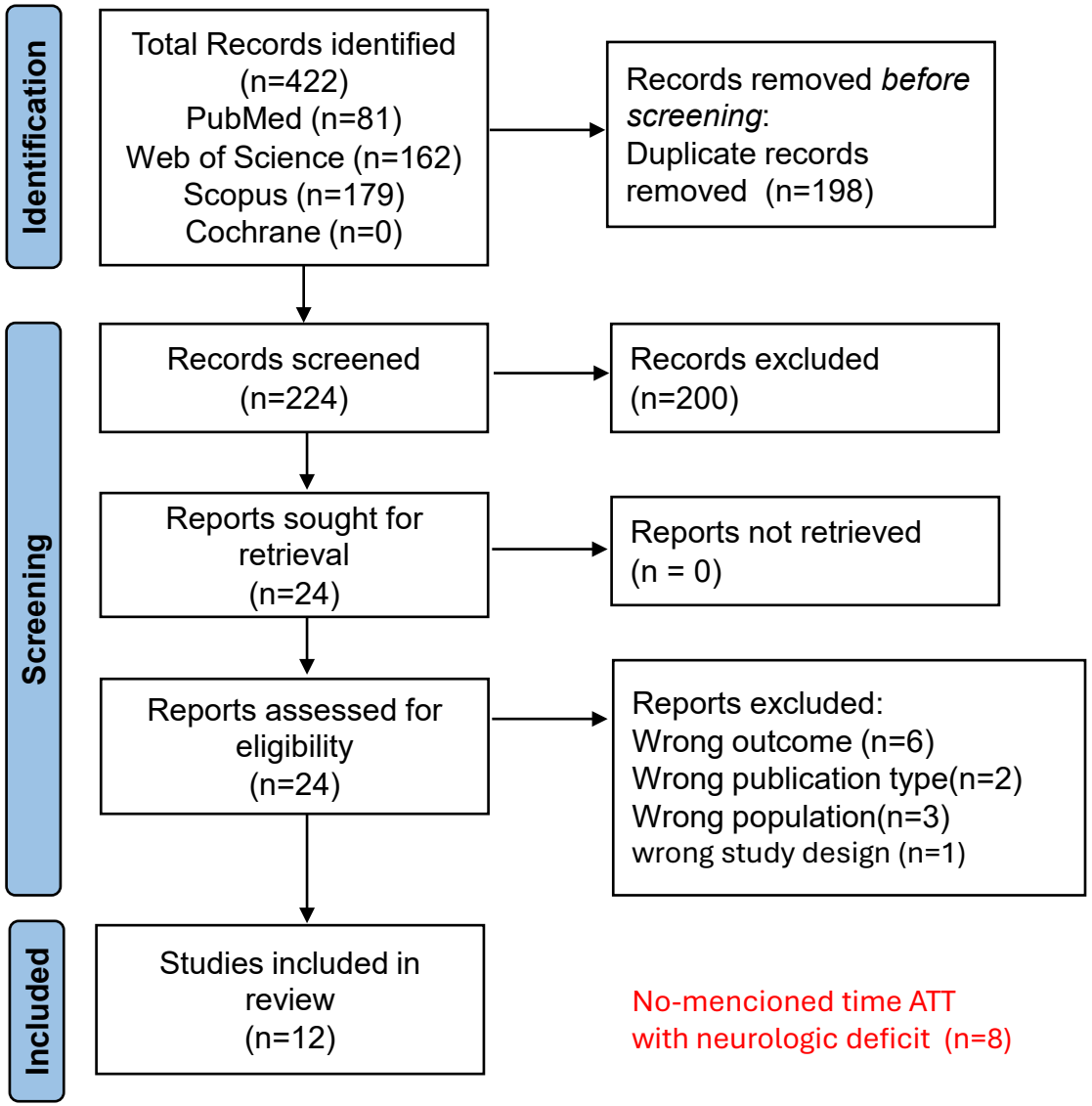
Literature Review/ Process

PubMed

Clarivate Web of Science™

Cochrane Library

Scopus



No-mencioned time ATT with neurologic deficit (n=8)

Findings from Literature

- Based on 12 retrospective articles, surgical indications include increased neurological deficit during ATT treatment; and, for some authors, the non-improvement of the motor deficit during the ATT.
- A major motor deficit was defined as a muscle power ⩽ grade 3, in which initial surgery would be indicated.
- Although only some of them establish an adequate time for pharmacological therapy before surgery. (Jia et al, De Souza et al, Liu et al and Garg et al).
- Two authors establish their criteria at 4 weeks as a cut-off point, one paper 4 – 6 weeks and one paper in 12 weeks.

Jia et al	Retrospective comparative	ASIA scale scores increased significantly 1 month after surgery in the <4-week group compared to the ≥4-week group (P = 0.001), and at 24 months improved to 4.4 ± 0.5 and 4.5 ± 0.4 in patients with anti-TB treatment times of ≥4 weeks and <4 weeks, respectively (P = 0.0895). surgery is performed when symptoms of TB poisoning decrease, ESR <40 mmol/h and hemoglobin >100 mmol/h/h
Liu et al	Retrospective comparative	47 patients, the duration of neurological symptoms prior to surgery, and not the degree of neurological involvement, correlates with the neurological recovery of patients; however, the reduction of preoperative chemotherapy does not produce a significant improvement in outcomes; therefore, undergoing four weeks of preoperative chemotherapy is acceptable.
Garg et al	Retrospective series	They described 12 weeks as time of ATT alone before surgery, 19% of 1,652 patients had neurological deficits. Surgery was required in 10.5% (173) of the patients, of whom 46 decided to have surgery after some time with ATT alone, 26 had a neurological worsening and 20 did not improve on conservative treatment at 12-16 weeks
De Souza et al	Retrospective series	A study aimed at a surgical approach, in which the authors decide on surgical treatment if there is no response to ATT within 4 to 6 weeks.

Question:

In a spinal tuberculosis patient with neurological deficit, how long can we wait for response with drug therapy before deciding for surgery?

❖Response:

Based on available data, in patients with spinal tuberculosis and neurological deficits, there is low-quality evidence to establish an adequate waiting time to evaluate the response to drug therapy before deciding on surgery.

- In patients with moderate or severe neurological deficits (MRC ≤ 3/5), the literature suggest starting chemotherapy and performing surgery as soon as possible.

- In patients with mild neurological deficit (MRC ≥ 4/5), the literature suggest start chemotherapy and re-evaluate the possibility of surgery after 4 weeks.

Level of Evidence: Low / (Expert opinion)

❖Vote:

Agree – 94.7%, Disagree – 2.6%, Abstain – 2.6%
(Unanimous Consensus)