



Complementary role of *Mycobacterium* *w* immunotherapy for treating tuberculosis: A systematic review

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Objectives



- Systematic review to investigate the complementary role of *Mycobacterium* w immunotherapy for treating tuberculosis.



Methods (1)



- Databases searched included MEDLINE, EMBASE and LILACS
- We hand-searched journals, unpublished literature, abstracts and proceedings of the conferences i.e. (International Union Against Tuberculosis & Lung Disease World Congress (IUATLD) and European Respiratory Society World Congress (ERS))
- Search terms used were: tuberculosis AND ("*Mycobacterium w*" OR immunotherapy OR immunoadjuvant OR vaccine)



Methods (2)



- We searched experimental and quasi experimental studies
- Active group included cases Inoculated with heat-killed *Mycobacterium w* vaccine
- Control group included cases who got placebo or no *Mycobacterium w*.
- Two studies were eligible to be considered in the review



Results (1)



- Sputum conversion was achieved within 30 days after initiation of treatment in 69 of 134 (51.5%) patients who received *Mw* vaccine
- Time to sputum conversion was reduced by almost 50% (60 days expected duration if on TB treatment alone to 30 days)
- At the end of intensive phase, sputum conversion was 75.5% in *Mycobacterium w* group compared to 51.8% in the control group (P value = <0.05)



Results (2)



Sputum conversion at 4 months (extended intensive phase) after initiation of treatment.

- The cure rate was 97.9% in *Mycobacterium w* compared to 77.7% in the control group.
- Treatment failure was 2.0% in *Mycobacterium w* compared to 22.2% in the control group (P value = <0.01)



Discussion & Conclusions



- *Mycobacterium w* used as adjuvant therapy has shown higher cure rates and significant reduction in time to sputum conversion in tuberculosis patients with high bacterial load.
- *Mycobacterium w* has shown potential in tuberculin conversion in HIV-infected people.



Future perspectives



- Future research should seek to further evaluate the effect of *Mycobacterium w* as adjunctive treatment in tuberculosis in large clinical trials.
- Phase 2/3 trials of *Mycobacterium w* as adjunctive treatment in Sputum smear positive pulmonary TB as well as MDR/XDR TB should be conducted.