

Updated Cochrane Review: Corticosteroids for managing tuberculous meningitis

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The Cochrane Infectious Diseases Group (CIDG) have carried out a review update to evaluate the effects of corticosteroids being used alongside anti-tuberculosis medication to treat people suffering from tuberculous meningitis.

Tuberculous meningitis is a serious form of tuberculosis (TB), which affects the membranes that cover the brain and [spinal cord](#). The infection causes headache, coma, and death is common. Survivors are also at risk of being disabled from brain damage.

Corticosteroids are commonly used alongside anti-tuberculosis medication to treat people with the condition. Corticosteroids help reduce inflammation in the brain and surrounding blood vessels, which reduces pressure on the brain and the number of deaths. However, there is some concern among clinicians that while [corticosteroids](#) may improve survival, survivors are more likely to be severely disabled.

The review author team, from the All India Institute of Medical Sciences, New Delhi and LSTM, examined all data published up to 18 March 2016. They included nine trials, with 1337 people in total, which evaluated the effect of giving dexamethasone, methylprednisolone, or prednisolone along with anti-tuberculosis drugs. One included trial was of high quality while all other included trials had inconsistencies due to incomplete reporting.

The review authors found that corticosteroids reduce the risk of death by

a quarter at two months to two years after the start of treatment. One trial followed up all of the participants for five years, by which time there was no difference in the effect on death between the groups given the corticosteroids and those that weren't; however the reasons for this change over time is unknown. This trial also looked at the effects of corticosteroids on HIV-positive people, but the small number of included participants meant that the review authors were unsure if the benefits in terms of a reduction of death was preserved in this group of participants.

Dr. Hannah Ryan from LSTM, who led the [review](#) update, said: "The highest quality evidence clearly shows steroids reduce deaths by a quarter. Estimates for severe disability are not so accurate as it is far less common, but even the most pessimistic statistical estimate from the trials tells us that the benefits of steroids from lower mortality benefit far more patients than the possible small possible increase in disability in the survivors."

The CIDG has been in operation since 1994. With over 600 authors from 52 countries it is led by Professor Paul Garner, Dr David Sinclair, and Anne-Marie Stephani, with its editorial base at LSTM.

More information: Prasad K, Singh MB, Ryan H. Corticosteroids for managing tuberculous meningitis. *Cochrane Database of Systematic Reviews* 2016, Issue 4. Art. No.: CD002244.
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