

Role of adjunctive glucocorticoid therapy in central nervous system tuberculosis

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Abstract

Introduction: Central nervous system (CNS) tuberculosis (TB) is a frequently encountered infection in the regions of the world where the prevalence of post-primary dissemination is common among children & adults. It includes three clinical categories: tuberculous meningitis, intracranial tuberculoma, & spinal tuberculous arachnoiditis.

Method: A comprehensive search of PubMed & EMBASE from their inception to October 2019 was made using 3 search items: glucocorticoid therapy, tuberculous meningitis, & intracranial pressure. The search items were combined using the Boolean operator. A further search was made of the United States Centres for Disease Control & Prevention (CDC), Cochrane Database Syst Rev, World Health Organization guidelines, & ClinicalTrials.gov with no language restriction.

Results: Randomized control trials (RCTs) have demonstrated a mortality benefit when adjunctive glucocorticoid therapy is used in HIV-uninfected CNS TB patients. Since data in HIV-infected patients is sparse, the same mortality benefit has not been reproduced thus far in such cases. In a systemic review including nine trials (1337 patients with CNS TB), adjunctive glucocorticoid therapy was associated with a lower mortality rate (risk ratio 0.75, 95% CI 0.65-0.87). In a RCT from Vietnam (545 patients with CNS TB), lower mortality rate was observed in patients who received dexamethasone (32 versus 41 percent; relative risk 0.69, 95% CI, 0.52-0.92). In a RCT from South Africa (141 children with CNS TB), lower mortality rate was observed in patients who received prednisolone (4 versus 17 percent). Additionally, children who received steroid therapy were more likely to have subsequent IQ >75 (52 versus 33 percent).

Conclusion: There is good quality evidence now available supporting the use of adjunctive glucocorticoid therapy in patients with CNS TB (confirmed or suspected).



Biography:

Fazal-e-Rabi Subhani is currently working as a Pediatrician at The Rotunda Hospital in Rotunda, Dublin, Ireland. His main works are into the field of pediatrics and he has published many articles for the same.

Speaker Publications:

1. Thwaites GE, Nguyen DB, Nguyen HD, et al. Dexamethasone for the treatment of tuberculous meningitis in adolescents and adults. *N Engl J Med* 2004; 351:1741.
2. Schoeman JF, Van Zyl LE, Laubscher JA, Donald PR. Effect of corticosteroids on intracranial pressure, computed tomographic findings, and clinical outcome in young children with tuberculous meningitis. *Pediatrics* 1997; 99:226.
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4. Prasad K, Singh MB, Ryan H. Corticosteroids for managing tuberculous meningitis. *Cochrane Database Syst Rev* 2016; 4:CD002244.
5. World Health Organization. Guidelines for treatment of drug-susceptible tuberculosis and patient care, 2017 update.

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