Evidence Update

HIV/AIDS Series

Should people with HIV infection, pneumocystis pneumonia, and hypoxaemia receive corticosteroids?

Adding corticosteroids to usual treatment reduces mortality and need for mechanical ventilation in people with HIV infection, pneumocystis pneumonia, and hypoxaemia.

Inclusion criteria

Studies:

Randomized controlled trials with a follow-up period of 30 days or more.

Participants:

People with HIV infection, pneumocystis pneumonia, and substantial hypoxaemia (low levels of oxygen in the blood).

Intervention:

Intervention: corticosteroids in addition to baseline treatment with trimethoprim-sulfamethoxazole, pentamidine or dapsone-trimethoprim.
Control: placebo or usual care in addition to baseline treatment with trimethoprim-sulfamethoxazole, pentamidine or dapsone-trimethoprim.

Outcomes:

Primary: death at 3 to 4 months.

Secondary: need for mechanical ventilation.

Results

- Six trials were included, with a total of 489 participants. Three had adequate allocation concealment. Three trials included baseline treatment with a combination of trimethoprim-sulfamethoxazole, pentamidine, and dapsone-trimethoprim; one trial used trimethoprim-sulfamethoxazole and pentamidine; and the other two trials used 100% trimethoprim-sulfamethoxazole.
- Fewer participants receiving corticosteroids had died at 3 to 4 months follow up compared to controls (relative risk 0.68, 95% confidence interval 0.50 to 0.94; 6 trials, 489 participants).
- Fewer participants receiving corticosteroids required mechanical ventilation at 1 month follow up compared to controls (relative risk 0.38, 95% confidence interval 0.20 to 0.73; 3 trials, 388 participants).
- Treating nine patients with corticosteroids will prevent one death in settings where highly active antiretroviral therapy (HAART) is not available, and treating 23 patients will prevent one death in settings where HAART is available.

Adapted from Briel M, Bucher HC, Boscacci R, Furrer H. Adjunctive corticosteroids for Pneumocystis jiroveci pneumonia in patients with HIV-infection. *Cochrane Database of Systematic Reviews* 2006, Issue 3. Art. No.: CD006150. DOI: 10.1002/14651858.CD006150. *Evidence Update* published in March 2007.

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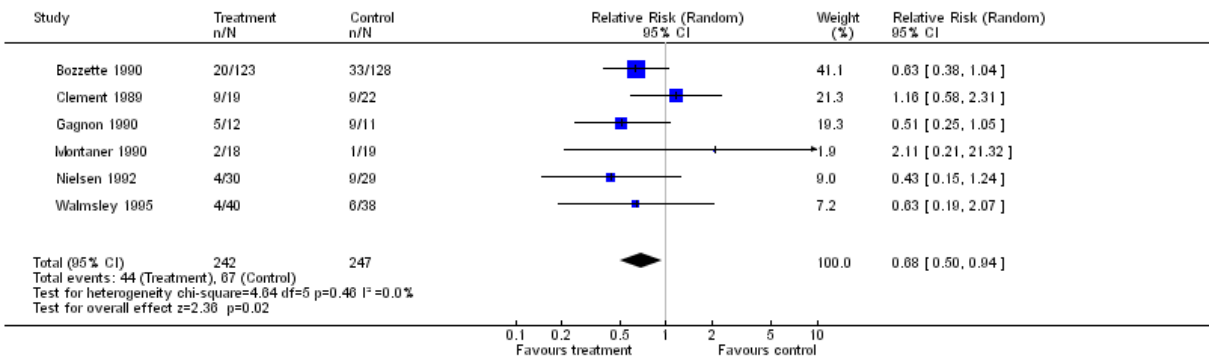
Corticosteroids versus control: death at 3 to 4 months



Authors' conclusions

Implications for practice:

Adding corticosteroids to treatment with trimethoprim-sulfamethoxazole, pentamidine, or dapsone-trimethoprim reduces mortality and need for mechanical ventilation in people with HIV infection, pneumocystis pneumonia, and hypoxaemia.

Implications for research:

The effectiveness of corticosteroids in this context has been confirmed, and there is no need for any further trials.