Evidence Update

Malaria Series *May 2006*

Does prophylaxis or intermittent treatment with antimalarial drugs benefit young children living in areas with malaria?

Antimalarial drugs reduce malaria illness, severe anaemia, and hospital admission in children susceptible to malaria.

Inclusion criteria

Studies:

Randomized or quasi-randomized controlled trials.

Participants:

Children between one month and six years living in areas where malaria is common.

Intervention:

Antimalarial drugs given at regular intervals, including consistent low dose (prophylaxis) and intermittent treatment with a full therapeutic course, compared with placebo or no drugs.

Outcomes:

Primary: clinical malaria; severe anaemia.

Secondary: death; hospital admission; blood transfusion; parasitaemia; enlarged spleen; need for second-line antimalarial drug; mean haemoglobin.

Adverse events.

Results

- Of 19 included trials, 13 evaluated prophylaxis and 6 intermittent treatment. All trials were from Africa. Allocation concealment was adequate in 7 trials and unclear in the rest. A further 8 trials are ongoing.
- The intervention reduced episodes of clinical malaria (relative risk 0.52, 95% confidence interval 0.35 to 0.77; 4051 participants, 8 trials) and severe anaemia (RR 0.54, 95% CI 0.42 to 0.68; 2727 participants, 8 trials). The effects were similar for prophylaxis and intermittent treatment.
- Significantly fewer children in the intervention groups were admitted to hospital (1149 participants, 3 trials), had parasitaemia (1785 participants, 6 trials), or had an enlarged spleen (1589 participants, 4 trials).
- There was a trend towards fewer deaths in the intervention groups compared with control (RR 0.82, 95% CI 0.65 to 1.04; 7929 participants, 9 trials).
- No evidence of increased number of malaria episodes was found in three trials following children for up to 18 months after ending the intervention.
- Six trials reported on adverse events, and none reported serious adverse events.

Adapted from Meremikwu MM, Omari AAA, Garner P. Chemoprophylaxis and intermittent treatment for preventing malaria in children. *Cochrane Database of Systematic Reviews* 2005, Issue 4. Art. No.: CD003756. DOI: 10.1002/14651858.CD003756.pub2.

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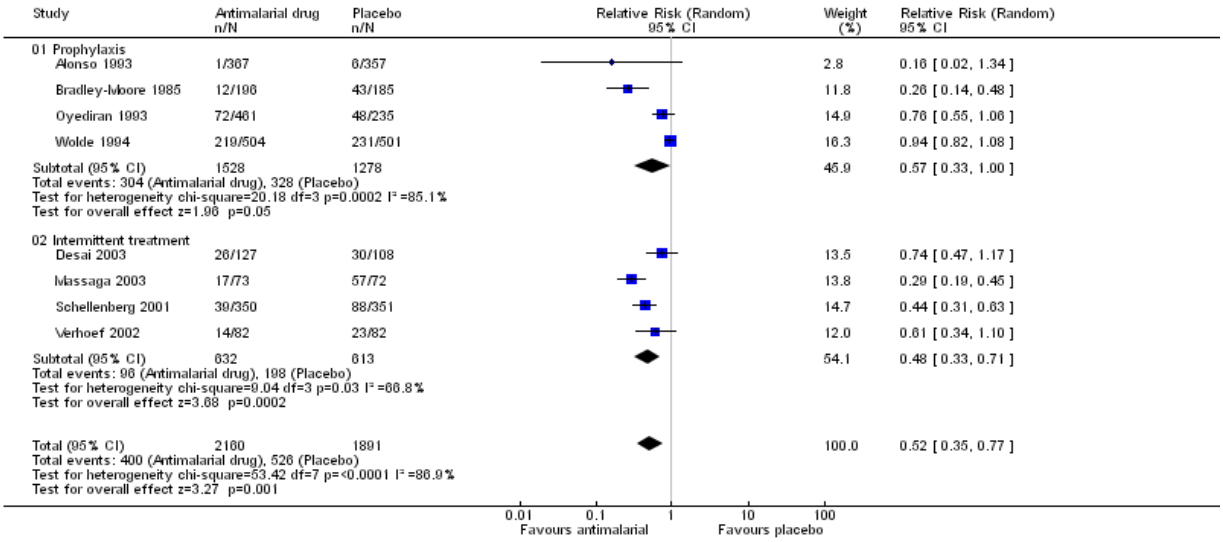
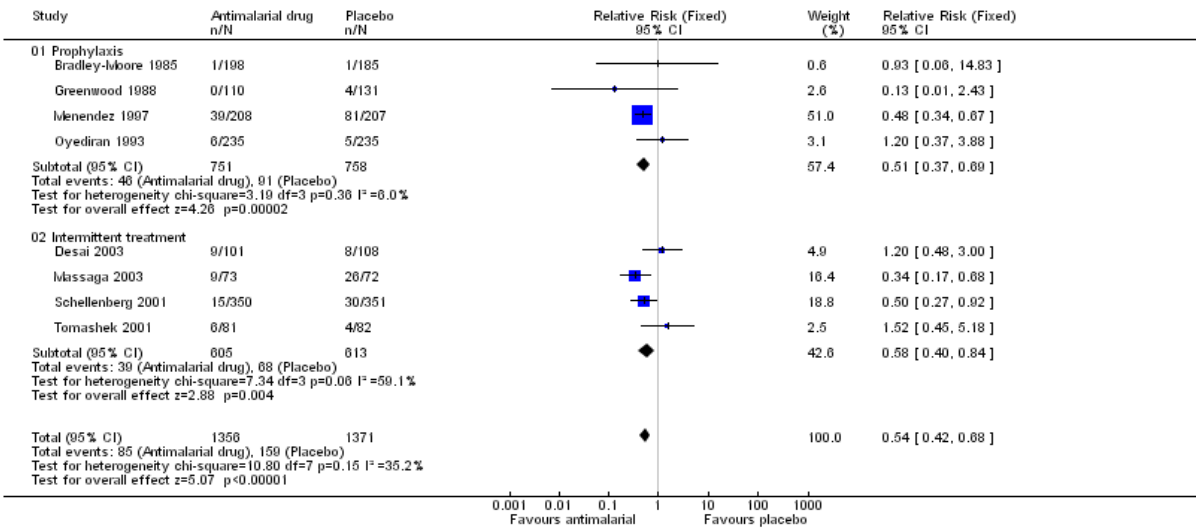
Clinical malaria: antimalarial drug versus placebo



Severe anaemia: antimalarial drug versus placebo



Authors' conclusions

Implications for practice:

Both prophylaxis and intermittent treatment with antimalarial drugs consistently reduce clinical malaria, severe anaemia, and hospital admission in children under the age of 7 in areas where malaria is common. There are insufficient data to know whether there is an impact on death, or whether there are any detrimental health effects once prophylaxis or intermittent treatment is stopped.

Implications for research:

Further trials should have long-term follow up to examine the potential impact on the children's long-term immunity to malaria. Current trials may provide some of the answers to these questions in the near future.