

Evidence Update

Summary of a Cochrane Review

Other Infectious Diseases Series

Is azithromycin better than current first-line treatments for typhoid and paratyphoid fever?

Azithromycin is at least as good as fluoroquinolones, but more expensive.

Background

Typhoid and paratyphoid fevers can kill people. In the past, chloramphenicol, ampicillin, and cotrimoxazole were effective, but multiple-drug resistant (MDR) strains of the bacteria have emerged. Thus newer antibiotics may be better, particularly azithromycin, fluoroquinolones, and cephalosporins.

Inclusion criteria

Studies:

Randomized controlled trials

Participants:

People with typhoid or paratyphoid fever confirmed by culture of *S Typhi* or *S Paratyphi* from blood, stool, urine or bone marrow.

Intervention:

Intervention: oral azithromycin.

Control: any other antibiotic drug.

Outcomes:

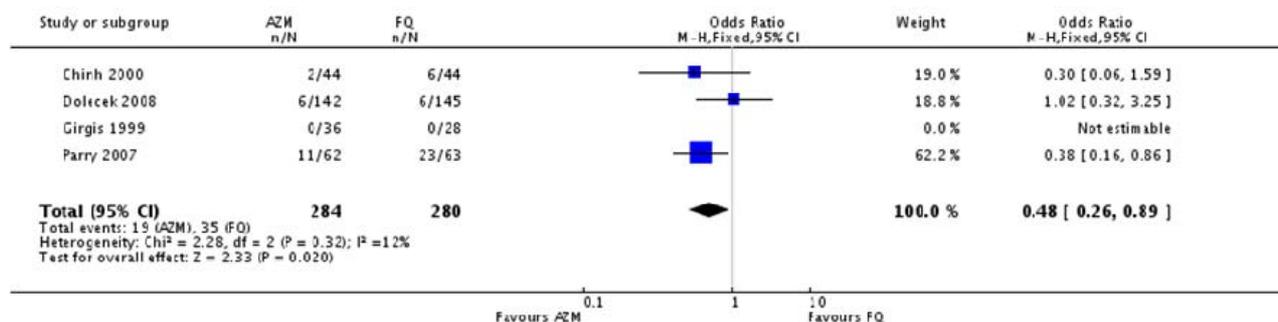
Clinical or microbiological treatment failure, fever clearance time, duration of hospital stay, relapse within 30 days, adverse events.

Results

Seven trials involving 773 participants were included; all were adequately concealed. All trials were conducted in low or middle-income countries, and included some participants with MDR strains.

- Compared with chloramphenicol, no significant difference in treatment failure was detected with azithromycin in one small trial (77 participants).
- Compared with fluoroquinolones, azithromycin performed better, with fewer clinical failures (odds ratio 0.48, 95% confidence interval 0.26 to 0.89; 564 participants, 4 trials), and shorter mean stay in hospital (mean difference -1.04 days, 95% CI -1.73 to -0.34 days; 213 participants, 2 trials), but there were no differences in microbiological failure, relapse, or fever clearance time.
- Compared with ceftriaxone, azithromycin performed better in relation to relapse (OR 0.09, 95% CI 0.01 to 0.70; 132 participants, 2 trials), but there were no differences in clinical or microbiological failure, or fever clearance time.

Azithromycin vs fluoroquinolones: clinical failure



Authors' conclusions

Implications for practice:

Azithromycin performs as well as fluoroquinolones for most outcomes, and may be better at reducing clinical treatment failures and length of hospital stay. Azithromycin also appears to be as effective as ceftriaxone, although there is less evidence for this comparison. There is not enough evidence to compare azithromycin with first-line antibiotics currently used.

Implications for research:

More trials are needed to determine whether azithromycin is better than first line antibiotics, as these are cheaper and have fewer reported adverse events.