

Three days of antibiotics is enough for uncomplicated cystitis

Research question How long should you treat women with uncomplicated cystitis?

Answer Three days of antibiotics is enough to relieve symptoms. A longer course (5-10 days) is more likely to achieve bacteriological cure but causes more side effects than a shorter course

Why did the authors do the study? Randomised trials suggest that a short course of antibiotics works as well as more prolonged treatment for women with uncomplicated cystitis. But most trials were small and may have missed important differences between the two approaches.

What did they do? The authors did a systematic search for all randomised trials comparing a short course (three days) of any antibiotic with longer treatment (median 7 days) in women with uncomplicated cystitis. They combined the results using meta-analysis. When possible, the authors confined their analyses to women with bacteriological evidence of infection. They looked for the effects of treatment on symptoms and rates of bacteriological cure in the short term (two weeks from the start of treatment) and longer term (eight weeks). They also compared the risk of adverse events associated with each regimen. They did not use intention to treat analysis for the main results but did in a later sensitivity analysis.

What did they find? They found 32 relevant randomised trials including a total of 9605 women. Overall, three days' treatment with any antibiotic cured women's symptoms as effectively as a longer course of treatment. The relative risk of treatment failure within two weeks among women treated for three days was 1.06 (95% CI 0.91 to 1.24). Longer term results were similar, except in the subgroup of women older than 41 years. Among older women treated for three days, the relative risk of treatment failure over eight weeks was 1.78 (1.19 to 2.75). Women treated for three days were less likely to have sterile urine than women treated for longer (relative risk of treatment failure 1.2 (1.0 to 1.44) over two weeks and 1.27 (1.09 to 1.47) over 8 weeks). But they were also less likely to report adverse events (relative risk 0.83, 0.79 to 0.91).

The findings were consistent across all classes of antibiotic including quinolones, β lactams, and combinations of sulphonamides and trimethoprim. Two women developed pyelonephritis out of the 582 women in trials reporting this outcome. Both were treated for three days.

What does it mean? This meta-analysis shows that for women with uncomplicated cystitis, three days of antibiotics is enough to cure symptoms with a minimum of side effects. The authors suggest this treatment strategy for most women. When bacterial eradication is particularly important, the benefits of longer treatment (5-10 days in these trials) may outweigh the risk of side effects. The authors say doctors should discuss the longer treatment option with women who have recurrent painful cystitis, those planning a pregnancy, or women likely to have compromised immunity.

The hint that women over 41 do better after longer treatment needs to be confirmed in further trials. This finding was based on post hoc analysis of only three trials including 765 women.

Katchman EA, et al. Three day vs longer duration of antibiotic treatment for cystitis in women: systematic review and meta-analysis. *Am J Med* 2005;118:1196-207.

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Editor's choice

A big mistake

The world of medical journals was shaken last week by the sacking of another high profile editor. John Hoey, editor of the *CMAJ*, was summarily dismissed in the final act of a long running dispute with the journal's owner, the Canadian Medical Association (CMA), about interference in editorial decisions. I say "another editor" because it seems no time at all since the former editors of the *New England Journal of Medicine* and *JAMA* were sacked (*BMJ* 1999;319:272). Amidst the ensuing outcry about infringements of editorial freedom, some hard and important lessons were learnt but not, we now know, by the CMA.

What happened has emerged only gradually over the past week because those directly involved are banned from speaking publicly. The story and reactions to it are described in this week's news (p 503). In brief, the CMA objected to articles published in the journal that were critical of constituencies the CMA supports. The final straw was the publication of a news item carrying critical comments about the appointment of Canada's new health minister, Tony Clement, who supports private provision within the public sector, as does the CMA. The *BMJ* picked up the story (*BMJ* 2006;332:384), but the original news item has been pulled from the *CMAJ* website and has not yet appeared in print.

Tensions are bound to exist between journal editors and owners. I could argue that unless these exist the editor is not doing her job. But editors must be accountable and accept that there are limits to their freedom: a series of poor decisions or unethical behaviour would be reasons for removing an editor. Neither of these charges is laid at John Hoey's door. He is widely credited with taking the journal to new heights, with gains in its impact factor, readership, and international profile. However, a journal's credibility cannot survive interference from its owner. As Hoey wrote in a brave editorial exposing the CMA's transgressions (*CMAJ* 2006;174:9), "Readers expect *CMAJ* editors to select content without interference, and authors expect their work to be judged without regard to the interests of any third party."

A report on editorial autonomy commissioned by Hoey at the end of last year will come too late to prevent serious damage to the journal's reputation. It will say that the CMA must commit to establishing proper mechanisms to protect the journal from political or commercial interference and must make a public statement supporting editorial independence (as the BMA has). Unless and until the CMA takes at least these steps, there is a consensus among the editors and academics I have spoken to that no one worth their salt would or should countenance taking Hoey's place.

This is a sorry tale that shows how little the CMA (its officers and—since there is no sign of a concerted outcry from them—its members) understands what it means to be the custodian of an international academic medical journal. It's a sad irony that, in protecting its interests so officiously, the CMA has seriously damaged one of its most important assets.

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