Azithromycin was cost-effective for genital Chlamydia trachomatis infections


Objective
To determine the incremental cost-effectiveness of doxycycline therapy compared with single-dose azithromycin therapy in women with uncomplicated cervical Chlamydia trachomatis infection.

Design
Decision analysis in which the health outcomes, costs, and cost-effectiveness (from the perspective of the payer) of 2 provider-administered treatment strategies were compared.

Setting
United States.

Patients
2 hypothetical cohorts of 100,000 non-pregnant women of child-bearing age who had laboratory-confirmed, uncomplicated cervical chlamydial infections.

Intervention
One cohort was treated with oral doxycycline, 100 mg twice daily for 7 days. The other cohort was treated with azithromycin, 1 g in a single oral dose.

Main cost and outcome measures
Health outcomes, costs, and incremental cost-effectiveness were confined to direct medical costs. The probability estimates used in the model were obtained from a review of the literature and a survey of experts.

Main results
Using the best available probability estimates, azithromycin therapy resulted in fewer major and minor sequelae of Chlamydia trachomatis infection. Given the average costs of management of the sequelae, the azithromycin strategy cost U.S. $39.51 per patient compared with U.S. $69.07 per patient for the doxycycline strategy. The superiority of azithromycin therapy was insensitive to changes in the probability assumptions and the cost estimates. In univariate sensitivity analyses, azithromycin therapy prevented more major and minor complications but cost more than doxycycline therapy when doxycycline effectiveness was >93%. In a multivariate sensitivity analysis, 11 probability estimates were altered to maximize the cost-effectiveness of doxycycline therapy. The azithromycin strategy still resulted in fewer major and minor complications but was more costly, with an incremental cost-effectiveness of U.S. $521 per additional major complication prevented. Even in this extreme case, however, if the antibiotic cost differential was < U.S. $9.80, azithromycin was less expensive and more effective.

Conclusion
Azithromycin therapy was more cost-effective than doxycycline therapy in women with uncomplicated cervical chlamydial infections.

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For article reprint: Dr. J.M. Douglas Jr., Disease Control Service, Denver Department of Public Health, 605 Bannock St, Denver, CO 80204, USA. FAX 303-436-7211.
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