

TREATMENT EFFICACY OF 1G AZITHROMYCIN VERSUS 100MG DOXYCYCLINE BI-DAILY FOR SEVEN DAYS FOR ASYMPTOMATIC RECTAL CHLAMYDIA TRACHOMATIS

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Background:

Rectal chlamydia is the most commonly diagnosed bacterial sexually transmissible infection among men who have sex with men (MSM) and there is increasing concern about rectal chlamydia in women. The absence of randomised controlled trial (RCT) evidence means there is ongoing debate about the most efficacious treatment.

Methods:

We conducted a double-blind RCT to compare the efficacy of azithromycin 1g single-dose with 7-days doxycycline 100mg twice daily for the treatment of asymptomatic rectal chlamydia. MSM diagnosed with asymptomatic rectal chlamydia infection at five sexual health clinics in Australia were randomly assigned to receive either doxycycline or azithromycin. The primary outcome was rectal chlamydia microbiological cure defined as a negative nucleic acid amplification test at four weeks post-treatment. Logistic regression was used to calculate the difference in microbial cure within a modified intention to treat population that excluded L2 serovar diagnoses post-recruitment.

Results:

We enrolled 625 men and randomly assigned 314 to doxycycline and 311 to azithromycin between August 2016 and August 2019. Primary outcome data were available for 290 (92%) assigned to doxycycline and 297 (96%) assigned to azithromycin. In the modified intention to treat population, the observed microbiological cure was 281/290 (96.9%; 95%CI: 94.9 to 98.9) for doxycycline and 227/297 (76.4%; 95%CI: 73.8 to 79.1) for azithromycin, with an adjusted risk

difference of 19.9% (95% CI: 14.6 to 25.3) in favour of doxycycline. Adverse events including nausea, diarrhoea and vomiting were reported by 33.8% (98/290) receiving doxycycline and 45.1% (134/297) azithromycin (risk difference=-11.3%; 95%CI: -19.5 to -3.2). Chlamydial load at baseline was greater for those in the azithromycin arm who failed treatment compared to those who did not.

Conclusion:

The efficacy of doxycycline was found to be 20% higher compared to azithromycin in the treatment of asymptomatic rectal chlamydia infection among MSM. Doxycycline must replace azithromycin as first-line treatment for asymptomatic rectal chlamydia.

Disclosure of Interest Statement:

The authors have no conflicts of interest to declare.