

# EVALUATION OF MINOCYCLINE IN THE TREATMENT OF CHLAMIDIAL GENITAL INFECTIONS

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## ABSTRACT

29 patients in whom the chlamydial genital infection was proved by enzyme immunoassay (Abbot) were treated with minocycline in a dose 100 mg a day for 10 days. In 28 out of 29 patients the control tests became negative after therapy.

## KEY WORDS

*Chlamydia trachomatis, genital infection, enzyme immunoassay, minocycline, treatment*

## INTRODUCTION

The majority of cases of non-gonococcal urogenital infections are due to *Chlamydia trachomatis* and to agents like *Ureaplasma urealiticum* or *Mycoplasma hominis*. The clinical complications of chlamydial genital infections in males can closely resemble those due to *Neisseria gonorrhoeae*: urethritis, prostatic, epididymitis, and proctitis (7). The most important clinical manifestations in females include: urethritis, mucopurulent cervicitis, vaginitis.

## PATIENTS INVESTIGATED

The study was done on following patients: those with symptoms of an urogenital infection, patients who visited the outpatients introduction oral contraception as well as asymptomatic patients under observation, 21 of them were females and 8 males.

The diagnostic test that we have used to detect

*Chlamydia trachomatis* antigen was Chlamydiazyme (Abbott), which specificity is close to 95% and sensitivity is close to 85%.

Other laboratory tests to detect *Chlamydia trachomatis* are detection of antichlamydial antibodies in blood serum (4), the cytodagnostic assessment of chlamydial inclusion bodies with May-Grunwald-Giemsa stain and the cultivation of chlamydia in cell cultures (2,6,9).

The specimens are to be taken with an appropriate swab and transported in a medium that is included in a Chlamydiazyme kit.

Each *Chlamydia trachomatis* positive patient received minocycline per os, 100 mg per day, for 10 days. Those who had received antibiotics in the preceding two months or had been treated with antacid drugs were excluded. We also excluded patients with positive anamnesis for vertigo and intolerance to tetracyclines.

The control samples have been taken 15 days after the end of the therapy.

## RESULTS

Chlamydia trachomatis antigen has been detected in 17 samples of patients with genital symptoms, in 8 samples of women seen for abortion and in 4 samples of women seen for hormonal therapy.

At the end of therapy, 15 patients were healed, 4 improved and in 1 the therapy failed. In the 9 patients, the clinical evaluation was not possible because they were asymptomatic at the moment of the diagnosis.

28 out of 29 patients were Chlamydia-negative after the 10-day treatment with minocycline (96,5%).

## DISCUSSION

Chlamydia trachomatis is recognized as a common cause of genital infections in the developed countries. It is important to detect the presence of Chlamydia trachomatis in asymptomatic young females and to treat them in order to reduce the complications due to spreading of the pathogen to the adnexa or into peritoneum (pelvic inflammatory disease,

perihepatitis).

Moreover chlamydial infections of the Fallopian tubes seems to be an important cause of infertility (3,8). There exists also the possibility of an infection of the newborn resulting in conjunctivitis or pneumonia. The costs of inadequate treatment, in terms of increasing antimicrobial resistance and complications, by far outweigh the costs of an effective early treatment (1).

The arms that we have against this infection are tetracyclins and macrolides (1,5). The importance of this study is the observation that after therapy with minocycline, the microbial eradication was achieved. It may be concluded that the bacteria are quickly inhibited and eliminated by the patients' own defense mechanisms.

On the whole, the rate of clinical recovery and microbiological eradication higher than 96% can be considered a satisfactory result. Patients tolerated minocycline well and found the single dose regimen convenient. We conclude that minocycline is safe and effective in the treatment of Chlamydia trachomatis infections.

## REFERENCES

1. Anon. Recommendations for the management of sexually transmitted diseases WHO advisory group meeting on sexually transmitted diseases treatments. WHO/GPA/STD/93.1. WHO, Geneva, 1993.
2. Le Bar W, Herschman B, Jemal C, Pierzchala Y. Comparison of DNA-probe, monoclonal antibody enzyme immunoassay and cell culture for detection of Chlamydia trachomatis. J Clin Microbiol 1989; 27: 826-28.
3. Meijer CJ, Calome JJ, de Windt EJ, Risse EK, Bleker OP, Kenemons P et al. Prevalence of Chlamydia trachomatis infection in a population of asymptomatic women. Eur J Clin Microbiol Infect Dis 1989; 8:127-30.
4. Meyer MP, Amrtegui AJ. Evaluation of single whole inclusion serum test for IgG antibody to Chlamydia trachomatis in asymptomatic women. Genitourinary Medicine 1987; 63: 22-25.
5. Schachter J. Chlamydia trachomatis infection: diagnosis and treatment. Infectious Diseases Newsletter, 1985; 4: 2.
6. Smith JL, Rogers RE, Katz BP, Brickler JF, Lineback PL, Van Der Pol B et al. Diagnosis of Chlamydial infection in women attending antenatal and gynecology clinics. J Clin Microbiol 1987; 25: 858-72.
7. Stamm WE, Koutsky LA, Benedetti JK, Brunham RC, Holmes KK. Chlamydia trachomatis urethral infection in men. Prevalence, risk factors, and clinical manifestations. Ann Intern Med 1984; 100: 47-51.
8. Wingerson L. Two new tests for Chlamydia get quick results without culture. JAMA 1983; 250: 2257-59.
9. Zanetti S, Zancocchia B, Zanetti AL, Fadda G. Detection of Chlamydia trachomatis in genital specimens by using an enzyme-immunoassay and conventional culture. Quaderni Sclavo di Diagnostica Clinica e di Laboratorio 1986; 22: 4-9.

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