

Prevention of *Chlamydia trachomatis* infections

Jens Boman

Akademisk avhandling

som med vederbörligt tillstånd av Rektor vid Umeå universitet för
avläggande av medicine doktorsexamen framläggs till offentligt försvar i
Hörsal Betula, byggnad 6M, fredagen den 10 januari 2014, kl. 10:00.
Avhandlingen kommer att försvaras på svenska.

Fakultetsopponent: Docent Hans Fredlund,
Institutionen för hälsovetenskap och medicin, Örebro universitet,
Örebro, Sverige.



**Department of Public Health and Clinical Medicine,
Dermatology and Venereology**

Umeå University
Umeå, 2013

Organization

Umeå University
Department of Public Health and
Clinical Medicine
Dermatology and Venereology

Document type

Doctoral thesis

Date of publication

20 December 2013

Author

Jens Boman

Title

Prevention of *Chlamydia trachomatis* infections

Abstract

Urogenital chlamydia infection, caused by the bacterium *Chlamydia trachomatis* (CT), is the most common sexually transmitted bacterial infection in Sweden. In 2008 it was estimated by WHO that there were 105.7 million new cases of CT worldwide, an increase by 4.2 million cases (4.1%) compared to 2005. If untreated, CT infections can progress to serious reproductive health problems, especially in women. These complications include subfertility/infertility, ectopic pregnancy and chronic pain. The CT infection is often asymptomatic and reliable diagnostic methods and contact tracing are important tools for identifying infected individuals. CT infection is classified in the Swedish Communicable Diseases Act as a serious disease; consequently, written reporting and contact tracing are compulsory.

Previous or ongoing CT infection is not uncommon in infertile couples, especially in women with tubal factor infertility (TFI). We have tested 244 infertile couples for CT antibodies, and CT IgG positive couples were tested for CT DNA in urine. The prevalence of CT antibodies was higher in infertile men and women, and ongoing CT infection was common. Our results support a role of CT in infertility and underscore the importance of prevention of CT infection.

Contact tracing was studied during using questionnaires. A total of 544 questionnaires was sent to tracers in a Swedish county and 534 (98%) were completed. Centralized contact tracing performed by experienced tracers is effective; on average 65% of sexual contacts found by contact tracing are CT-infected. Our data show that it is worthwhile to extend the tracing period beyond 6 months as 30% of reported sexual contacts between months 7-12 were CT-infected. Contact tracing may be performed face-to-face at the clinic or by telephone.

Because of the severe consequences of CT infection there is a need for useful methods for both primary and secondary prevention of CT and other sexually transmitted infections (STIs). An important sub-population for CT/STI-prevention is the "core group", i.e. a subpopulation with high incidence of STIs combined with risky sexual behaviours. This subpopulation contributes particularly to the spread of STIs in the population. Therefore, we have developed and evaluated a brief standardised but flexible manual-based single-session intervention based on motivational interviewing (MI) for the reduction of high risk sexual behaviour. Women (n=105) and men (n=119) at high risk of contracting CT infection were randomly either offered brief MI counselling or standard care. Our findings support the effectiveness of brief MI-based counselling in reducing high-risk sexual behaviour and incident CT infection in women ($p < 0.01$) but not in men.

Our results suggest that gender aspects need to be considered and that men and women should be treated differently for achieving maximal risk-reduction. Whereas it might be sufficient to include information and motivation when performing risk-reducing counselling on women, counsellors may also add other components, such as behavioural skills and booster sessions, when counselling is performed on men.

Keywords

Chlamydia trachomatis, cell culture, infertility, contact tracing, motivational interviewing, prevention

Language

English

ISBN

978-91-7459-747-9

ISSN

0346-6612

Number of pages

x + 73 + 5 papers