EDITORIAL

Chlamydia infection raises long-term risk of reproductive complications

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INFECTION WITH CHLAMYDIA INCREASES THE RISK OF PELVIC INFLAMMATORY DISEASE (PID), ECTOPIC pregnancy and tubal factor infertility by at least 30%, a nationwide study from Denmark has shown.[1] The risk persisted throughout the 17 years of follow-up. Following a second infection the risk of PID was increased by a further 20%.

Women who had had a positive chlamydia test result were matched by age and sex to four women drawn from the population register. Chlamydia diagnoses were identified from laboratory data and hospital care records from the Danish National Patient Registry.

Inclusion criteria were women who entered the cohort data set, a subset of the Danish Chlamydia Study, after 1 January 1995 when aged 15-44 years, and who were in a five-person set (one chlamydia-positive, four chlamydia-negative or never-tested women).

'Adjusted hazard ratio for each reproductive complication was 31-50% higher in women positive for chlamydia'

The outcome measures were episodes of hospital care related to PID, ectopic pregnancy or tubal factor infertility. Follow-up continued until 31 October 2012.

There were 516,720 women included in the study, of whom 103,344 (20%) had tested positive, 182,879 (35%) had tested negative and 230,497 (45%) had never been tested. Mean age at entry was 22.4 years and mean follow-up was 8 years.

Rates per 100, 000 person-years for PID, ectopic pregnancy and tubal factor infertility for chlamydia-positive, chlamydia-negative and never-tested women are shown in table 1, below. Adjusted hazard ratio (AHR) for each reproductive complication was 31-50% higher in women who tested positive for chlamydia compared with women who tested negative, see below. This increased risk remained throughout 17 years of follow-up.

- Pelvic inflammatory disease AHR 1.5 (95% CI: 1.43-1.57)
- Ectopic pregnancy AHR 1.31 (95% CI: 1.25-1.38)
- Tubal factor infertility AHR 1.37 (95% CI: 1.24-1.52)

Nearly a quarter (22.3%) of women in the positive group had one or more further positive tests during follow-up. The risk of PID was increased by a further 20% after a second infection: AHR 1.20 (95% CI: 1.11-1.31) but the risk remained unchanged for ectopic pregnancy and tubal factor infertility.

The authors conclude that a single episode of chlamydia infection increased the risk of all complications and a repeat infection increased the risk further for PID but not for ectopic pregnancy or tubal factor infertility.

'This increased [PID] risk is present throughout the reproductive lifetime and therefore the index chlamydia test is likely, at least in part, to be a surrogate for other risk factors for PID, most likely undiagnosed sexually transmitted infections, including repeat chlamydia infections, which might be mediated through sexual or health-care seeking behaviour,' the authors conclude.

PID and its sequelae such as chronic pelvic pain and psychosexual difficulties can be distressing for the patient and difficult to treat in some cases. We now have very accurate tests for chlamydia and the use of non-invasive sampling such as urine tests and self-sample vaginal swabs makes it easier for testing in primary care.

The study findings add further evidence to the case for prevention, early detection and effective treatment of chlamydia infection. Although this study did not evaluate the impact of a screening programme, it might add further weight to any intervention that aims to reduce the incidence of untreated, symptomatic or asymptomatic, infections.

Table 1

Rate of reproductive complications per 100,000 person-years[1]

	Pelvic inflammatory disease	Ectopic pregnancy	Tubal factor infertility
Chlamydia +ve	403 (95% CI: 389-417)	284 (95% CI: 273-296)	74 (95% CI: 68-80)
Chlamydia -ve	266 (95% CI: 258-274)	217 (95% CI: 210-224)	54 (95% CI: 50-57)
Never tested	89 (95% CI: 84-94)	90 (95% CI: 86-95)	16 (95% CI: 14-18)

REFERENCE
1 Davis B, Turner KME, Frølund M et al. Risk of reproductive complications following chlamydia testing: a population-based retrospective cohort study in Denmark. Published Online: 08 June 2016 http://dx.doi.org/10.1016/S1473-3099(16)30092-5 www.thelancet.com/journals/laninf/article/PIIS1473-3099(16)30092-5/fulltext

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