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Richmond S J, Hilton A L & Clarke S K R. Chlamydial infection: role of *Chlamydia* Subgroup A in non-gonococcal and post-gonococcal urethritis. *Brit. J. Vener. Dis.* 48:437-44, 1972.
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The recovery of *Chlamydia trachomatis* from men attending two sexually transmitted disease clinics was studied. There was a highly significant association between chlamydiae and urethritis, and men with both gonococcal and chlamydial infection developed postgonococcal urethritis. We postulated that chlamydial urethritis may occur as a result of reactivated rather than newly acquired infection. [The SCJ® indicates that this paper has been cited in over 135 publications.]

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The late 1960s saw a dramatic increase in nonspecific genital infection in Western societies; in 1973 nearly 70,000 cases of nongonococcal urethritis (NGU) were reported from sexually transmitted disease (STD) clinics in England. The condition was twice as common as gonorrhoea, but the cause was unknown. Until then cumbersome isolation techniques had precluded investigation into the role of *Chlamydia trachomatis* in NGU. However, the late Francis Gordon introduced his cell culture technique for isolation of chlamydiae to Barrie Jones and coworkers at the Institute of Ophthalmology in London, where the superiority of this new method over older techniques was demonstrated. Therefore, by the early 1970s the stage was set for epidemiological studies into the role of *C. trachomatis* in nonspecific urethritis.

Our study was carried out on the late Tony Hilton's patients at STD clinics in Bristol and Bath. Study design was profoundly influenced by Suzanne Clarke, the clinical virologist under whom I was training at the Bristol Public

Health Laboratory. We provided convincing evidence that chlamydiae cause urethritis since men with gonorrhoea who had concomitant chlamydial infections subsequently developed postgonococcal urethritis (PGU). The major role that chlamydiae play in this form of NGU has been confirmed in numerous studies since 1972.

A far more controversial issue (and one that probably accounts for this paper's frequent citations) was our interpretation of the role of chlamydiae in NGU. For, although we were able to demonstrate a highly significant association between chlamydiae and urethritis, the isolation rate in gonorrhoea, though lower, did not differ significantly from that in NGU. We therefore postulated that (1) some of the chlamydial infection that we identified represented reactivation of a preexisting latent infection rather than a newly acquired infection, (2) gonococcal infection was one way that chlamydial infection may be reactivated, and (3) such reactivated infection caused urethritis. This hypothesis was reiterated two years later when we demonstrated the frequency of mixed chlamydial and gonococcal infection in women, a study that also highlighted how common asymptomatic chlamydial infection was in the female.¹ Our study and others in the early 1970s heralded an explosion of interest and research into these exceedingly common, sexually transmitted pathogens that, it is now realised, have profound effects on fertility in women.²

In retrospect, the discussion of this paper seems impossibly prolix. It was in fact the first paper that I wrote, and I regret some of the terminologies we used, in particular, the use of the word "latent"; "inactive" or "clinically and microbiologically inapparent" would have been better.³ Nevertheless, the concept that genital chlamydiae form persistent quiescent infections capable of reactivation has gradually gained ground and has stimulated fundamental research into mechanisms of chlamydial persistence. Chlamydial urethritis, presenting as either NGU or PGU, is now a fully accepted entity.⁴ Certain aspects of NGU, however, remain an enigma, particularly the problem of recurrent/relapsing urethritis in the absence of any identifiable genital tract pathogens.

1. Hilton A L, Richmond S J, Milne J D, Hindley F & Clarke S K R. Chlamydia A in the female genital tract. *Brit. J. Vener. Dis.* 50:1-10, 1974. (Cited 145 times.)
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4. Oriel J D & Ridgway G L. Genital infection in men. *Brit. Med. Bull.* 39:133-7, 1983.

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