Strains of TRNG used in this study

Strain	Isolation date	Source	MIC (mg/l)	Disc diffusion test* (mm)	tetM type
60061	1985	Yokohama	16	15.0	American
5120	1991	Thailand	64	10.0	Dutch
6010	1994	—	32	12.0	Dutch

*A zone of inhibition from the edge of the tetracycline disc to the edge of confluent growth.

cline disc to the edge of confluent growth (table). In this study, we further characterised the *tetM* genes of these TRNG strains.

Ison *et al*¹ previously reported the primer pair (A: 5'-GGCGTACAAGCA-CAAACG-3' and B: 5'-TCTCT-GTTCAGGTTTACTCG-3') for detection of *tetM* in *N gonorrhoeae*. These sequences were derived from that of the *Ureaplasma urealyticum tetM* gene.² More recently, the nucleotide sequences of the *tetM* genes of American and Dutch type plasmids have been determined and suggested that the *tetM* determinant found in the American type plasmid has a different origin from that in the Dutch type.³ Because the base sequence of the *tetM* gene from Dutch type plasmid which corresponds to the primer B is different from that of American type plasmid,³ primer B2 (5'-CCTTTGTTGAGGTTTGTCTCG-3') was used instead of the primer B to detect Dutch type *tetM*. The cells grown on a Kellogg's agar medium were lysed in 100 µl of distilled water for 10 minutes at 94°C. As a template, 5 µl of lysate was added to a polymerase chain reaction (PCR) mixture. The PCR mixture contained 0.2 mM (each) deoxynucleoside triphosphate, 50 pmol of each oligonucleotide primer, TaKaRa Taq DNA polymerase (TaKaRa Shuzo, Kyoto, Japan), and buffers provided by the manufacturer in a total volume of 50 µl. The mixture was overlaid with 50 µl of mineral oil and heated in a DNA thermal cycler PJ-2000 (TaKaRa) for 25 cycles consisting of 45 seconds at 94°C, 60 seconds at 58°C, and 60 seconds at 72°C.

PCR amplification using the primer pair of A and B gave a product of the predicted size of 765 base pairs (bp) from strains 60061 but not from 5120 or 6010. On the other hand, the primer pair of A and B2 amplified a 765 bp fragment from strains 5120 and 6010 but not from 60061. The restriction digests using *MspI* of the PCR products of 60061 gave the predicted three fragments of 370, 260, and 140 bp. *MspI* digests of the PCR products of 5120 and 6010 generated three fragments of 540, 140, and 90 bp. The amplified products were sequenced using the ABI PRISM Dye Terminator Cycle Sequencing Ready Detection Kit (Perkin-Elmer Corp CT, USA) and the ABI 310 Genetic Analyzer (Perkin-Elmer Corp), and that from 60061, and 6010 and 5120 were identical to corresponding sequence of the *tetM* gene from American and Dutch type plasmids,³ respectively.

It is of interest that the isolation rate of TRNG was quite low and both American and Dutch type *tetM* genes were found in Tokyo and Kanagawa, Japan during the study period. A patient with a strain 60061, isolated in 1985 was infected in Japan. A strain 5120 was imported from Thailand (table). These facts imply that TRNG already existed in 1985 in Japan and has been transported from other countries, but has not spread in Tokyo and Kanagawa area. Ison *et al*¹ found two types of *HpaII* (*MspI*) digestion pattern of the PCR products from *tetM* in TRNG strains. In this study we

clearly distinguished the American type *tetM* gene from the Dutch type one using the PCR with the sets of the primer pairs. Further investigations will be needed to elucidate the prevalence of each type of *tetM* gene in *N gonorrhoeae* infections.

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- 1 Ison CA, Tekki N, Gill MJ. Detection of the *tetM* determinant in *Neisseria gonorrhoeae*. *Sex Transm Dis* 1993;20:329-33.
- 2 Sanchez-Pescador R, Brown JT, Roberts M, Urdea MS. The nucleotide sequence of the tetracycline resistance determinant *tetM* from *Ureaplasma urealyticum*. *Nucleic Acids Res* 1988;16:1216-7.
- 3 Gascoyne-Binzi DM, Heritage J, Hawkey PM. Nucleotide sequences of the *tet(M)* genes from the American and Dutch type tetracycline resistance plasmids of *Neisseria gonorrhoeae*. *J Antimicrob Chemother* 1993;32:667-76.

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MATTERS ARISING

Epidemiology of genital *Chlamydia trachomatis*

Simms *et al*¹ in their review of the epidemiology of genital *Chlamydia trachomatis* in England and Wales state that "ad hoc prevalence and case finding studies carried out over the past 20 years were critically assessed in terms of study design and testing methodologies". The authors, however, do not define what is meant by "ad hoc" and do not make explicit how the cited literature was obtained, sifted, and appraised. As a consequence they fail to identify all relevant published prevalence studies.

I recently reviewed the literature relating to the prevalence of *C trachomatis* infection in women attending British general practice² (which updated an earlier review of the literature³) and British family planning clinics.⁴ As I wished to ensure that all relevant studies were included I used an explicit search strategy and stated the reasons for inclusion or exclusion of the identified studies. This led to 15 relevant prevalence studies being identified and appraised. Simms *et al*,¹ in contrast, identified only six of these studies.

As far as general practice was concerned

nine studies which met defined criteria were included in the review. It was concluded that the best current estimate of the prevalence of genital chlamydia in women attending general practice is 3% to 4% (estimates range from 2% to 12%).² This conclusion was based on the results of two large general practice prevalence studies^{5,6} which were not quoted by Simms *et al*.¹ Six studies were identified from a review of the family planning literature with estimated prevalences of women attending family planning clinics ranging from 3% to 7%.⁴ The methodological quality of prevalence studies of genital chlamydia infection in women in general practice and at family planning clinics is, however, unsatisfactory. Common features of the studies reviewed were non-random sampling, small sample sizes, unclear inclusion/exclusion criteria, and use of different testing methods. This conclusion is in agreement with that of Simms *et al*.¹

The discrepancy between my findings and those of Simms *et al*¹ supports the argument made by the Evidence-Based Medicine Working Group that all reviews of the medical literature should make explicit how the cited literature was obtained, sifted, and appraised.⁷ Failure to do so is likely to lead to important papers being missed.

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- 1 Simms I, Catchpole M, Brugha R, Rogers P, Mallinson H, Nicoll A. Epidemiology of genital *Chlamydia trachomatis* in England and Wales. *Genitourin Med* 1997;73:122-6.
- 2 Stokes T. Screening for Chlamydia in general practice: a literature review and summary of the evidence. *J Publ Hlth Med* 1997;19:222-32.
- 3 Oakeshott P, Hay P. General practice update: chlamydia infection in women. *Br J Gen Pract* 1995;45:615-20.
- 4 Stokes T. Chlamydial infection in UK family planning clinics. *Br J Fam Planning* 1997 (in press).
- 5 Oakeshott P. Sexual health in teenagers. *Lancet* 1995;346:648-9.
- 6 Clay JC, Bowman CA. Controlling chlamydial infection. *Genitourin Med* 1996;72:145.
- 7 Oxman AD, Cook DJ, Guyatt GH. Users' guides to the medical literature. VI. How to use an overview. *JAMA* 1994;272:1367-71.

Reply

Dr Stokes raises a number of important issues and correctly points out that the method of assessing the literature was not fully explained.¹ The paper aimed to provide a concise, comprehensive, and timely review of what is a rapidly expanding field. A literature search was carried out using Medline and by trawling the literature. The study was confined to England and Wales (one review cited by Dr Stokes was concerned with the United Kingdom as a whole).² To ensure comparability between studies each paper was assessed in terms of the population studied, the presentation of results, and the testing strategy used. Studies were only included where the raw data were presented for individual clinical settings. Chlamydial diagnostic tests have undergone a rapid evolution over recent years and a wide variety of tests and testing strategies have been used. It is difficult, if not impossible, to make comparisons between all testing strategies but we decided to include only those studies that used a strategy based on screening and confirmatory tests.

Studies undertaken by physicians, micro-

biologists, and public health professionals have done much to increase understanding of the epidemiology of genital *C trachomatis*. The stringent inclusion criteria used in the review led to the exclusion of some studies; nevertheless, the paper gives a much needed summary of the epidemiology of this important public health problem.

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- 1 Simms I, Catchpole M, Brugha R, Rogers P, Mallinson H, Nicoll A. Epidemiology of genital *Chlamydia trachomatis* in England and Wales. *Genitourin Med* 1997;73:122-6.
- 2 Stokes T. Screening for Chlamydia in general practice: a literature review and summary of the evidence. *J Publ Hlth Med* 1997;19:222-32.

NOTICES

The International Union Against the Venereal Diseases and the Treponematoses (IUVDT) has changed its name to International Union Against the Sexually Transmitted Infections (IUSTI) on the occasion of its general assembly which was held in Melbourne on 26 June 1996. The union was founded in 1923 and is the oldest international organisation whose object is the achievement of international cooperation in the control of sexually transmitted diseases, including HIV infection. The IUSTI is on the roster of the United Nations economic and social council, and is an official non-governmental organisation in consultative status with the World Health Organisation. The *International Journal of STD & AIDS* is the official journal of IUSTI. Information and membership applications are available from the Regional Director for Europe of IUSTI: Dr Peter K Kohl, Neukölln Academic Hospital, Department of Dermatology and Venereology, Rudower Strasse 48, 12351 Berlin, Germany. Tel: +49 (30) 6004-3601; Fax: +49 (30) 6004-3542.

University of Sydney, Department of Public Health, Faculty of Medicine

Applications are invited from medical graduates for enrolment in a Master of Medicine course (1 year full time, 2 years part-time) which begins in February 1998. Further details: Ms Kim Hutchinson or Professor Adrian Mindel, Academic Unit of Sexual Health Medicine, Sydney Hospital, GPO Box 1614, Sydney, NSW 2001, Australia. Tel +61(2) 9382-7420; fax +61(2) 9382-7425; email: khutchin@mail.usyd.edu.au. **Closing date:** 12 December 1997.

The Annual Scientific Meeting of The Genitourinary Physicians Colposcopy Group—The Stakis Leicester, 4-5 October 1997

Further details: Dr Emile T Morgan, St Luke's Hospital, Bradford. Tel: 01274 365088.

RCP/RCGP Conference on HIV/AIDS Shared Care—Royal College of Physicians, London, 9 October 1997

Women and Children with HIV and AIDS, 10 October 1997

A workshop to be held at Queen Charlotte's

& Chelsea Hospital, London. Applications to: Symposium Secretary, RPMS Institute of Obstetrics & Gynaecology, Queen Charlotte's & Chelsea Hospital, Goldhawk Road, London W6 0XG. Tel: 0181-383 3904; Fax: 0181-383 8555; email: sympreg@rpms.ac.uk

Gay and Lesbian Mental Health—14 October 1997, Royal Society of Medicine, London

Further details: Tim Hoof. Tel +44 (0) 171 290 2900.

Sixth European Conference on Clinical Aspects and Treatment of HIV-Infection, 11-15 October 1997, Hamburg, Germany

Further details: Professor Dr M Dietrich, Sixth European HIV-Conference, Bernhard-Nocht-Institute for Tropical Medicine, Bernhard-Nocht-Strasse 74, D-20359 Hamburg, Germany. Tel +49-40-31182 390; Fax +49-40-31182 394.

Sixth Regional Symposium on The Design and Method of Clinical Trials, 16-17 October 1997, at UCSF's Laurel Heights Campus in San Francisco, California, USA

Further details: Lynda McNeal, Office of Continuing Medical Education, University of California, San Francisco, CA 94143-0742, USA. Tel: (415) 476 4251; Fax: (415) 476-0318.

Association of Genitourinary Medicine (AGUM) AGM—Royal Society of Medicine, London, 17 October 1997

International Congress of Sexually Transmitted Diseases—IUVDT/ISSTD Joint Meeting—Seville, Spain, 19-22 October 1997

Further details: International Congress of STD, Apartado 6077, 41080, Seville, Spain.

The 4th Annual Courses on Lasers in Cutaneous and Cosmetic Surgery, Minneapolis, Minnesota, 24-26 October 1997

Further details: John Sprague, Office of Continuing Medical Education, University of California, San Francisco, CA 94143-0742, USA. Tel: (415) 476-4251; Fax: (415) 476-0318.

Gynaecological Oncology, 17 November 1997

A symposium on gynaecological oncology will be held at Queen Charlotte's and Chelsea Hospital, London. Further details: Symposium Secretary, RPMS Institute of Obstetrics & Gynaecology, Queen Charlotte's and Chelsea Hospital, Goldhawk Road, London W6 0XG. Tel: 0181-383 3904; Fax: 0181-383 8555; email: symposia@rpms.ac.uk

Cochrane Review Group in Sexually Transmitted Diseases—18-19 November 1997, Center for Disease Control, Atlanta, USA

Further details: Dr Frances Cowan. Tel +44 (0) 171 380 9863.

4th International Congress on AIDS in Asia and the Pacific, 18-22 November 1997, Manila, Philippines

Further details: Dr Ofelia T Monzon, Chair, Organising Committee, 4th International

Congress on AIDS/STD in Asia-Pacific. Fax +63 2 711 6693.

Psychosexual Medicine in Practice, 19-20 November 1997

A two day course on the practice of psychosexual medicine will be held at Queen Charlotte's and Chelsea Hospital, London. Further details: Symposium Secretary, RPMS Institute of Obstetrics & Gynaecology, Queen Charlotte's and Chelsea Hospital, Goldhawk Road, London W6 0XG. Tel: 0181-383 3904; Fax: 0181-383 8555; email: sympreg@rpms.ac.uk

Federation of Infection Societies Fourth Conference—26-28 November 1997, Manchester (MSSVD affiliated)

Further details: Rebecca Lawrence. Tel +44 (0) 1794 5121332/511331.

British Erectile Disorder Society, 27-28 November 1997

Further details: Mrs Judy Turner, Nurse Consultant, Ravenview, 139 Armitage Road, Rugeley, Staffs WS15 1PJ. Tel 01889 579400.

Advanced Course in HIV Management for GU Physicians: Changing Clinical Practice for the Millenium—28 November 1997, Paterson Ross Theatre, Robin Brook Centre, St Bartholomew's Hospital, London EC1

Further details: Centre for Professional Development, Whittington Campus, Highgate Hill, London N19 5NF. Tel: 0171-288 3352; Fax: 0171-288 5040.

Xth International Conference on AIDS and STDs in Africa, 7-11 December 1997, Abidjan, Ivory Coast

Further details: Professor A Kadio, Conference Chairman, Programme Nationale de lutte contre le SIDA, les MST et de la Tuberculose, Boite Postale 2113, Abidjan 04, Ivory Coast. Tel +225 24 30 13; Fax +225 24 31 19.

The Annual Advanced Seminar in Urology Surgery: Strategies in Office-Based Urology—12-13 December 1997, Ritz-Carlton Hotel on Nob Hill, San Francisco, California, USA

Further details: Office of Continuing Medical Education, Room MCB-630, Box 0742, University of California, San Francisco, CA 94143-0742, USA. Tel (415) 476-4251; Fax (415) 476-0318; email: inquire@ocme.ucsf.edu; internet URL: http://cme.ucsf.edu

The Liverpool course for the Diploma in Genitourinary Medicine and Venereology 1998, January to March 1998 (12 weeks)

This is a full time postgraduate course intended for all doctors wishing to gain a theoretical and practical knowledge of genitourinary medicine leading up to the examination for the Diploma in Genitourinary Medicine and Venereology of the University of Liverpool, held in March 1998.

Fees for tuition and examination (subject to revision): Home and EEC: £623; Overseas: £3613. Early application is advised. Application forms may be obtained from: The Secretary to the Course in Genitourinary Medicine and Venereology, University of Liverpool, Department of Medical Microbiology and GU Medicine, Duncan Building, Daulby Street, Liverpool L69 3BX, UK.