Correspondence

TO THE EDITOR, *British Journal of Venereal Diseases*

T cell proliferative responses to *Chlamydia trachomatis* antigen in vitro in patients with a history of gynaecological chlamydial infection

Sir,
The importance of *Chlamydia trachomatis* in genital tract infections is well established.¹⁻⁴ The humoral immune responses during chlamydial infections have been examined with several serological techniques,⁵ and in vitro cellular immune responses to chlamydial antigens in man have been studied with different assays.⁶⁻⁸ We report on the immune response after local and more severe chlamydial infections.

One group of patients consisted of 10 women who had had acute salpingitis 1-2 years before, probably caused by *C. trachomatis*. The women had had a positive chlamydial culture from the cervix and a fourfold or more rise in chlamydial IgG antibody titre during the disease. The other group consisted of 10 women who 1-2 months earlier had had chlamydial cervicitis, with only lower genital tract symptoms.

T cells and non-T cells were prepared from defibrinated blood, as described previously.⁸ A suspension of partially purified *C. trachomatis* subtype LGV-2 was used as antigen throughout the study.⁸ An enzyme

linked immunosorbent assay (ELISA) was used to show chlamydial IgG antibodies.⁵ A titre >1/8 was defined as a positive result. The T cell proliferative responses to chlamydial antigen were tested in U-bottomed wells using 2×10^4 antigen pulsed non-T cells and 5×10^4 T cells.⁸ After culture for five days the incorporation of ³H-thymidine was assessed by liquid scintillation counting.

As shown in the table, the proliferative T cell responses and the antibody titres to the chlamydial antigen were similar whether the women had had a serious or a minor chlamydial infection. Substantial variations were, however, observed in both patient groups. Our data suggest that T cell mediated immune responses are triggered to a quite high level after only local infections (such as cervicitis), and in general the response is no higher after a more invasive infection (such as salpingitis).

To further explore the role of cell mediated immune responses, further studies should investigate T cell mediated cytotoxicity against cells infected with *C. trachomatis*.

Yours faithfully,

E Qvigstad*

M Onsrud*

K Skaug†

*The Tissue Typing Laboratory, Rikshospitalet, The National Hospital, Oslo 1, Norway.

†The Microbiological Laboratory, Ullevaal Hospital, Oslo 1, Norway.

TABLE Proliferative T cell responses to chlamydial antigen compared with chlamydial IgG titres in 20 patients with salpingitis or cervicitis

Salpingitis (n = 10)		Cervicitis (n = 10)	
Counts per min*	IgG titres†	Counts per min	IgG titres
28 512	1/512	25 936	1/32
25 715	1/512	22 614	1/1024
22 624	1/1024	15 677	1/1024
18 823	1/128	12 510	1/512
16 611	1/512	12 104	1/256
13 183	1/16	10 753	1/256
12 954	1/512	9 549	1/512
11 338	1/256	9 541	1/512
9 743	1/1024	9 044	1/256
6 887	1/64	4 750	1/512

*Mean incremental counts per minute (cpm) (cpm with antigen-cpm without antigen); 2×10^4 antigen-pulsed non-T and 5×10^4 T cells.

†Chlamydial IgG titres as analysed by ELISA method.

References

- Schachter J. Medical progress. Chlamydial infections. *N Engl J Med* 1978; **298**:428-35.
- Schachter J. Medical progress. Chlamydial infections. *N Engl J Med* 1978; **298**:490-5.
- Schachter J. Medical progress. Chlamydial infections. *N Engl J Med* 1978; **298**:540-9.
- Taylor-Robinson D, Thomas BJ. The role of *Chlamydia trachomatis* in genital-tract and associated diseases. *J Clin Pathol* 1980; **33**:205-33.
- Skaug K, Vik ISS, Qvigstad E, Ulstrup JC, Jerve F. Chlamydial serum IgG antibodies in patients with acute salpingitis measured by an enzyme-linked immunosorbent assay. *Acta Pathol Microbiol Scand (C)* 1982; **90**:67-71.
- Hanna L, Schmidt L, Sharp M, Stites DP, Jawetz E. Human cell-mediated immune responses to chlamydial antigens. *Infect Immun* 1979; **23**:412-7.

- Brunham RC, Martin DA, Kuo C-C, et al. Cellular immune response during uncomplicated genital infection with *Chlamydia trachomatis* in humans. *Infect Immun* 1981; **34**:98-104.
- Qvigstad E, Skaug K, Thorsby E. Proliferative human T cell responses to *Chlamydia trachomatis* in vitro. *Acta Pathol Microbiol Scand (C)* 1983; **91**:203-9.

TO THE EDITOR, *British Journal of Venereal Diseases*

Treatment of uncomplicated anogenital gonorrhoea with a single oral dose of 3 g amoxycillin combined with 250 mg clavulanic acid

Sir,
Recent reports from the United States, Japan, and Europe show an increase in the incidence of gonorrhoea.^{1 2} Although the incidence in the United Kingdom has been static over the past year, that of β -lactamase producing strains has shown an exponential rise.³ We report our observations on 110 patients with a diagnosis, based on smears and cultures or on cultures alone, of uncomplicated anogenital gonorrhoea. All patients were treated with a single oral dose of 3 g amoxycillin potentiated with 250 mg clavulanic acid (Augmentin). Patients who did not live in Bournemouth, were sensitive to penicillin, or pregnant were not included in the trial. In the final analysis those who did not attend for at least two follow up examinations were excluded.

TABLE I Bacteriologically positive diagnoses in men

Site	Smear only	Culture/smear and culture*	Total
Urethra	6†	50	56
Rectum	0	17	17
Both	0	1	1
Total	6	68	74

TABLE II Bacteriologically positive diagnoses in women

Site	Smear only	Culture/smear and culture*	Total
Urethra	1	5	6
Cervix	4	3	7
Both	1	21	22
Total	6	29	35

*At least one positive culture.

†Primary female consorts of 4 gave positive cultures (treated in this clinic).