

Correspondence

TO THE EDITOR, *British Journal of Venereal Diseases*

Treatment of lymphogranuloma venereum with rifampicin

Sir,
Ridgway *et al.* (1978) tested the effect of 22 antimicrobial agents *in vitro* against SA2f, a laboratory maintained strain of *Chlamydia trachomatis*, which is immunologically identical with the LGVII serotype (Wang and Grayston 1970). Rifampicin was found to be the most active of the drugs tested. This laboratory finding has not been evaluated clinically. Presentation of results of his work (Ridgway, 1976) at an international conference on STD stimulated us to study the efficacy of rifampicin in the treatment of patients with lymphogranuloma venereum (LGV).

We studied eight patients, who were seen in 1976 and 1977 at the outpatient department of the dermatological service in Surinam. All showed inguinal lymphadenopathy, typical for LGV, and six of them also showed a small non-indurated ulcer on the genitals. The Venereal Disease Research Laboratory (VDRL) test gave negative results in all cases, and the six patients with ulcers showed no treponemes by darkfield microscopy and no organisms suggesting *Haemophilus ducrey* or *Donovania granulomatis* by Gram-stained and Giemsa-stained smears. Clinical diagnosis of LGV was made in all cases.

The presence of type-specific antibodies against *C. trachomatis* in the sera was examined by the microimmunofluorescence (MIF) test as described by Wang *et al.* (1975). The antigens used were of the three serotypes of *C. trachomatis* of the LGV type, LGVI, LGVII, and LGVIII. The MIF was performed with FITC labelled polyvalent conjugates. Following Wang, only reactions with a titre 1/8 were considered as positive. The Frei test was performed in four cases.

The results of the MIF and the Frei tests are presented in the Table. The clinical diagnosis of LGV was supported by the results of the MIF test in all cases.

The patients were treated with oral rifampicin 600 mg every morning until symptoms had disappeared; this occurred after two weeks in seven patients and after three weeks in one. No side effects of the

Table Results of microimmunofluorescent (MIF) antibody and Frei tests before start of treatment.

Case No.	Age Sex	Frei test results	Reciprocal MIF antibody titres		
			LGVI	LGVII	LGVIII
1	F 17	—	256	256	—
2	M 24	ND	—	≥64	—*
3	M 20	ND	—	≥64	16
4	M 24	ND	32	128	64
5	F 42	ND	16	64	16†
6	M 35	+	—	32	—
7	M 22	+	—	32	—
8	F 23	—	—	64	—

+ Positive — negative

*Two weeks after start of treatment

†Twelve weeks after start of treatment

ND not done

drug were noticed and no relapse of symptoms was observed during a control period of three months.

Rifampicin is highly effective against chlamydiae *in vitro* (Ridgway, 1978). Our results indicate that the drug is effective against LGV clinically. However, we do not recommend rifampicin as drug of choice for the treatment of LGV for the following reasons:

- (1) Most cases of LGV still respond well to treatment with tetracycline, which is a safe drug.
- (2) Indiscriminate use of rifampicin could make this drug less valuable for the treatment of mycobacterial infections, because of the possibility of these organisms developing resistance to it.
- (3) Keshishyan *et al.* (1973) showed that rifampicin-resistant chlamydiae emerged rapidly *in vitro* during egg passage in the presence of the drug.
- (4) Rifampicin is not effective against *Treponema pallidum*. Some clinicians might consider this to be a disadvantage, especially in cases in which the diagnosis of syphilis is not completely excluded, although others would consider it an advantage.

Yours faithfully,

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TO THE EDITOR, *British Journal of Venereal Diseases*

Preparation of *T. pallidum* extracts from infected rabbit testes

Sir,
When extracting *Treponema pallidum* from infected rabbit testes, either for experimental use or for passage into another rabbit, it is important to maintain optimum survival of the treponemes. Whereas some research groups use a crude testicular extract, others use centrifugation or centrifugation followed by filtration, to purify the treponemal suspension by removing testicular debris, including spermatozoa.

The effect of these procedures on this apparently delicate bacterium has not been reported to date, although the procedures are widely used. We wish to report their effect on the *in-vitro* retention of motility and virulence of *T. pallidum*.

Treponemes were eluted from the testes into prerduced maintenance medium (slightly modified from Graves *et al.*, 1975) at a concentration of approximately

Table Effect of centrifugation and filtration on the retention of virulence of *Treponema pallidum* (Nichols strain)

Incubation period (hours) before inoculation	No centrifugation/no filtration		Centrifugation only		Centrifugation/filtration (Millipore)		Centrifugation/filtration (Nucleopore)		Centrifugation/filtration (Millipore and Nucleopore)	
	A (days)	B (mm)	A (days)	B (mm)	A (days)	B (mm)	A (days)	B (mm)	A (days)	B (mm)
0	7.5	ND	9.5	ND	7.7	ND	8.7	ND	9.5	ND
24	11.5 (2/4)	3.5 (2/4)	9.5	8.8	13	9.8	11.7	14	11	14.5
48	16 (3/4)	3 (3/4)	14.7	6.5	14.7	6.7	13.7	10.8	13.7	12

A = time period (days) between intradermal inoculation of *T. pallidum* into rabbit and first appearance of syphilitic lesion. The smaller the value, the more readily the *T. pallidum* has grown *in vivo* and, by implication, the better its survival *in vitro*. The number in parenthesis represents the fraction of inoculation sites that developed syphilitic lesions; a value of <4/4 means that some inoculations were unsuccessful; the absence of a value means all four inoculations were successful, the value reported being the mean of four lesions.

B = the mean size of four lesions, except where fewer lesions developed (in parenthesis), measured 33 days after inoculation as the diameter of induration. ND = not done

10^7 /ml, centrifuged at $55 \times g$ for five minutes, and filtered through a prefilter (Millipore AP2002500) or a $0.8\text{-}\mu\text{m}$ polycarbonate membrane (Nucleopore) or both. The final filtrate was examined microscopically and appeared to contain no host cells. All *T. pallidum* samples for testing were diluted into pre-reduced maintenance medium (1/20), incubated anaerobically at 34°C , and examined microscopically over a 48-hour period to determine the percentage motility of the treponema suspension. Samples (0.5 ml) were taken at 0, 24, and 48 hours and diluted 1/1 with 20% glycerol in physiological saline. These were stored at -70°C until the completion of the experiment and then inoculated (in quadruplicate) into the shaved backs of rabbits (0.1 ml/site). A different rabbit was used for samples taken at 0, 24, and 48

hours. Rabbits were examined daily for up to one month and the first day of appearance of an indurated lesion was recorded.

No difference in motility retention was detected in any sample over the 48-hour period. However, other variables measured (that is, number of inoculation sites developing into syphilitic lesions, latent period of infection, and size of syphilitic lesions) all showed that the centrifuged and filtered extracts were in no way inferior to the crude untreated extract (Table). In fact, the extracts centrifuged and filtered through a Nucleopore filter, $0.8\text{-}\mu\text{m}$ with or without a Millipore prefilter, were apparently superior to the crude extract with respect to virulence. Latent periods of infection were shorter and lesion sizes larger.

In conclusion, centrifugation and

filtration of the crude rabbit testicular syphiloma extract appears to enhance the retention of virulence of *T. pallidum in vitro*, presumably by the removal of testicular debris that is deleterious to treponemal survival.

We wish to thank Ian McLean for his technical assistance.

Yours faithfully,

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TO THE EDITOR, *British Journal of Venereal Diseases*

Campylobacter jejuni in a male homosexual

Sir,
Following the recent letter by Simmons and Tabaqchali (1979), we should like to describe the isolation of *Campylobacter jejuni* from a male homosexual.

A 36-year-old man presented in July 1978 at the Seaman's Dispensary, Liverpool, having noticed pus around the faeces for the preceding three weeks but no diarrhoea. He last had rectal intercourse in January of that year. The only significant clinical finding was slight congestion of the rectal mucosa.

Neisseria gonorrhoeae was neither seen on Gram-stained rectal smear nor isolated

from rectal culture. However, *C. jejuni* was isolated on selective medium from the faeces using a similar technique to that described by Simmons and Tabaqchali (1979). Further smears and culture for *N. gonorrhoeae* four days later gave negative results.

In view of the clinical signs the patient was treated with oral erythromycin 250 mg six hourly for one week. After that time the patient was seen again, and he informed us that the faeces had returned to normal. On proctoscopy there was marked improvement of the rectal congestion. Faecal specimens at this time, and all subsequent specimens, failed to yield *C. jejuni*. After a further week the rectal mucosa was healthy.

This case further emphasises the need to examine specimens of faeces for enteric

pathogens from any patient presenting with abnormal bowel symptoms.

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- Simmons, P. D., and Tabaqchali, S. (1979). *Campylobacter* species in male homosexuals. *British Journal of Venereal Diseases*, **55**, 66.