

Axillary lymph node with giant cells containing refractile particles. Haematoxylin and eosin  $\times 300$  with substage condenser removed to enhance refractility.

and wrist joints inserted seven years previously because of rheumatoid arthritis. The prostheses were made of Silastic brand silicone rubber. Silicones are organosilicon compounds consisting of a chain of alternate silicon and oxygen atoms with organic groups, usually methyl, attached to the other silicon valencies. In Silastic, various silica (silicon dioxide) additives are mixed with the silicone for strength and hardness and there are also small amounts of colour additives. The silicon content of Silastic exceeds 20% by weight. This should enable the fragments to be identified by microprobe analysis, a technique which only detects elements of atomic number over 23. The lymph node block was therefore deparaffinised, digested with hot (60°C) sodium hydroxide and the dried deposit examined in a scanning electron microscope equipped for energy dispersive x-ray analysis. This revealed irregular particles rich in silicon.

Silastic is widely used in bioengineering because it is strong and inert but there are rare reports of it exciting tissue reactions. Local reactions to silicone breast implants were reported by Symmers<sup>1</sup> and to silicone joint prostheses by Aptekar *et al*<sup>2</sup> and Christie *et al*.<sup>3</sup> This last group were the first to describe a patient with a foreign body reaction to silicone in lymph nodes draining joint prostheses. Two further cases of such silicone lymphadenopathy were described by Kircher.<sup>4</sup> The present case is

only the fourth to be reported. Subsequent to Christie's report it was emphasised that silicone rubber incites one of the most benign reactions to foreign material, and that complications of silicone joint prostheses are extremely rare.<sup>5,6</sup> Recently silicone derived from a prosthetic joint has been noted in a lymph node affected by malignant lymphoma<sup>7</sup> but the significance of this association is uncertain at present.

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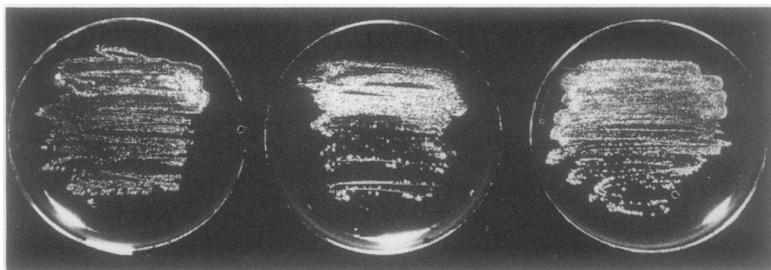
#### Recovery of *Neisseria gonorrhoeae* from clinical specimens after direct culture at 25°C and 28°C

It was recently shown that many isolates of *Neisseria gonorrhoeae* grow quite readily, albeit slowly, at temperatures as low as 25°C.<sup>1</sup> These findings were made on strains which had been initially isolated at the conventional temperature of 37°C. The

observations have now been extended to demonstrate that many isolates of this organism grow quite readily on plates which are inoculated from clinical material and incubated directly at 25°C.

These isolations were made from patients who presented at the Venereal Disease Control Clinic of Western Australia and were obtained from plates inoculated with discharges which were positive by direct smear examination. The swabs were placed initially in Stuart transport medium and plated on Thayer-Martin medium within three hours. With some specimens the swabs were streaked directly on a series of plates for incubation at various temperatures. With others, the swab was placed in a tube containing 1 ml of nutrient broth which was then agitated on a vortex mixer and single drop aliquots of the fluid were streaked out on the Thayer-Martin plates. This latter procedure provided a more quantitative control of the inocula. Plates were incubated in airtight containers with added moisture and CO<sub>2</sub>. Temperatures of incubation were 37°C, 28°C, and 25°C, and room temperature (circa 20-22°C) and were monitored by thermometers checked against standard instruments. The tests were made on 4 consecutive specimens.

The recoveries at 37°C varied from sparse to confluent growth in the primary streak areas. All plates incubated at 28°C yielded growth, the majority comparable to that obtained at 37°C and the growth rate was approximately half that occurring at the higher temperature. At 25°C, 15 of the specimens examined failed to produce colonies and the majority of these were from specimens which yielded sparse growth at 37°C. Colonies developing at 25°C were variable in size and began to appear at about 2-3 days attaining diameters of 1-2 mm within 6-7 days. With many isolations where the recoveries were confluent growth was obvious within 2 days. Subcu-



Recoveries of *N gonorrhoeae* from urethral discharge plated directly on Thayer-Martin medium and incubated at 25°C for 7 days (left), 28°C for 3 days (centre) and 37°C for 2 days (right)

ture from the confluent areas and incubation at 37°C yielded rapid growth which could be readily confirmed as gonococcal. The isolate shown in the Figure was an example of one yielding heavy recoveries at all three temperatures tested. At room temperature the only colonies seen were occasional commensals and contaminants. All cultures which grew at 25°C were confirmed by smear, oxidase tests, carbohydrate fermentation, and immunofluorescence. Many of them were dried for preservation.

It is now apparent that while all gonococcal strains may not be recoverable from clinical material at 25°C, a considerable proportion are and further studies may shed light on the diversity of the genus with regard to this characteristic.

No suggestion is made that these findings have any immediate application in the diagnosis of gonorrhoea although it is now obvious that isolation temperatures for the organism are not as critical as is generally believed. The higher region of the range does of course result in the more rapid growth rate and recovery of the organism. The findings however, do have considerable relevance in the accurate definition of the species and should be of interest in physiological and epidemiological studies of the organism and its disease.

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*plasma pneumoniae* (MP) infections significant increases in complement fixing (CF) antibodies against MP are often seen.<sup>1,2</sup> This is probably due to components in the lipid antigen used in routine CF.<sup>3</sup> If MP suspension is treated with Tween-ether after extracting the lipid components from the suspension, most CF activity is lost but the obtained antigen works well in enzymeimmunoassay (EIA) and these above mentioned false-positive reactions seen in CF are eliminated. This may have important implications in the routine serological diagnosis of MP infections.

Not infrequently, similar, presumably false-positive CF reactions are seen in infections of the central nervous system.<sup>5</sup> In four patients with a microbiologically verified bacterial meningitis (three caused by *Haemophilus influenzae* and one by *Neisseria meningitidis*) significant increases of CF antibody levels against the MP lipid antigen were detected. When EIA with Tween-ether treated antigen was used no marked rises of antibody levels could be shown in the sera of these patients against MP although in control patients with respiratory infections during an MP epidemic EIA was found to be equally sensitive as the CF test in the serological diagnosis of MP (Table). Similarly, erroneous serological diagnoses in some patients with bacterial sepsis could be eliminated with EIA using the Tween-ether treated antigen.

In patients with aseptic meningitis and encephalitis significant CF antibody rises can occasionally be seen.<sup>6-10</sup> Interestingly, our EIA results suggest that only a few of them (2 of 11) are true MP infections.

Precise serological diagnosis of MP is difficult if CF is used as the routine method. The introduction of EIA with Tween-ether treated antigen may improve the accuracy significantly in many clinical conditions.

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## False-positive complement fixing antibodies against *Mycoplasma pneumoniae* in patients with bacterial meningitis

We have previously shown that in acute pancreatitis not associated with *Myco-*

## Number of patients with EIA and CF increases of antibody levels against *Mycoplasma pneumoniae* in bacterial meningitis and pneumonia

	CF-positive/EIA-positive	CF-positive/EIA-negative
Bacterial meningitis	0/4	4/4
Pneumonia	4/4	0/4