Correspondence

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TO THE EDITOR, *Genitourinary Medicine*

Conventional tissue culture compared with rapid immunofluorescence for identifying *Chlamydia trachomatis* in specimens from patients attending a genitourinary clinic

Sir,
Teare and colleagues conclude from their study that the use of the Syva monoclonal fluorescent antibody provides as sensitive a means of detecting *C trachomatis* infections as a conventional cell culture procedure.¹ This is not an unusual conclusion because it is one that has been drawn by several other workers. It is, however, unusual and remarkable to detect chlamydiae in 76% of men with non-gonococcal urethritis and in the cervix of 71% of women with pelvic inflammatory disease. These extraordinarily high positivity rates need some explanation and provide us with an opportunity to draw attention to an issue that may have been overlooked in this and other studies. The issue is that the "standard" method is regarded as the one providing the infallible results. Teare and colleagues consider a false positive result as being one in which the organisms are not detected by their standard cell culture method but are detected by the fluorescent antibody procedure. But what about the possibility of a false positive result occurring as the result of identifying as inclusions in cell culture bodies that are not inclusions? A correlation between the two procedures could still exist if there was also misidentification of fluorescing particles in genital smears. Could this be the explanation for the remarkably high positivity rates presented without comment by these authors? We doubt whether any regional preponderance could account for them, though there may have been a quirk of patient selection unknown to us (16% of patients were excluded from analysis for various reasons). Furthermore the authors may possibly have encountered a period of high chlamydial detection rates by chance alone. In this regard it would be instructive to learn what the detection rates have been over the periods before and since the study. The authors state that they had a well established culture service at the start, yet noted that during the study the incidence of chlamydial infection

was "much greater than had hitherto been thought". If detection rates have been maintained at the levels reported, then we would conclude that there may well be technical problems along the lines we have indicated and that all is not well in the state of Denmark Hill.

Yours faithfully,
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Reference

Teare EL, Sexton C, Lim F, McManus T, Uttley AHC, Hodgson J. Conventional tissue culture compared with rapid immunofluorescence for identifying *Chlamydia trachomatis* in specimens from patients attending a genitourinary clinic. *Genitourin Med* 1985;61:379-82.

TO THE EDITOR *Genitourinary Medicine*

Comparison of immunofluorescence and culture methods in the diagnosis of chlamydial infections

Sir,
In a recent paper comparing conventional tissue culture with rapid immunofluorescence in the identification of *Chlamydia trachomatis*, Teare and his colleagues suggested that the choice of method rests with "cost, expertise, and practicalities in individual departments".¹ We would like to present the data from an analysis carried out at the Coventry department of genitourinary medicine.

We studied 109 men attending the clinic with symptoms and signs of urethritis (5 pus cells/high power field). Urethral specimens from the first 55 (group 1) were tested for chlamydiae using Imagen (Boots Celltech, Slough, Berkshire, England) and cell culture.

Specimens from the remaining 54 men (group 2) were tested using MicroTrak (Syva, Maidenhead, Berkshire, England) and the same cell culture method.

The table shows our results. In group 1, 11 specimens were positive by immunofluorescence and 12 by cell culture. Taking culture technique as the standard method, the sensitivity of Imagen was 83% and specificity was 98%. In group 2, 24 specimens were positive by MicroTrak and 27 by culture. The sensitivity was 74% and specificity 86%.

TABLE Results of two immunofluorescence tests for *Chlamydia trachomatis* compared with culture of urethral specimens from 109 men with urethritis

	Culture positive	Culture negative
Group 1:		
Imagen positive	10	1
Imagen negative	2	42
Group 2:		
MicroTrak positive	20	4
MicroTrak negative	7	23

Of the two immunofluorescence systems, the slides stained using the MicroTrak method were easier to read because the elementary bodies stained well against a better counterstain. Though specimens from men presented few problems, on some slides from a group of women patients tested subsequently, we found a heavy uniform fluorescence, which was difficult to interpret. This was found in both the Imagen and MicroTrak slides and may have been due to the excess mucus in the slide.

Imagen cost £1.95 and MicroTrak £2.45 per test, excluding the cost of technician time. Conventional culture cost £1.25 including technician time. In our hands conventional tissue culture was cheaper and at least as efficient in diagnosing chlamydial infections. Though in clinics where an adequate culture method already exists, culture is cheaper and