

We thank Mr J Reid, Mr J McDermott, and Mr W Kirkwood for the histological staining and S Campbell for typing the paper. RAJ Spence was in receipt of an Eastern Health and Social Services Board research fellowship during this study.

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Letters to the Editor

Necrotising granulomata in prostatic resection specimens—a sequel to previous operation

We read with interest the article by Dr Lee and Dr Shepherd.¹ We have observed similar appearances in two patients, aged 61 and 62 years, who had second transurethral prostatectomies 22 and 25 days respectively after their first operations. There was no clinical evidence of preceding urinary infection or tuberculosis.

In both cases there were granulomata in the second specimen, whereas they were absent from the first, which showed only benign nodular hyperplasia. The giant cells, most of which were of the foreign body type and occasionally contained pigmented particles or fibrinoid material, were situated close to necrotic areas, and there was also an infiltrate of lymphocytes, plasma cells, neutrophils, and eosinophils; the last were numerous in one patient. There was frequent squamous metaplasia of prostatic ducts. We did not find distinctive linear and non-linear changes, as did Dr Lee and Dr Shepherd.

We agree that these lesions are induced by operative trauma. The squamous metaplasia may be the result of ischaemia, but the latter is probably not directly related to the granulomatous reaction since granuloma is not a feature of spontaneous prostatic infarction.

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Anti-DNA immunoassay

Concern recently expressed¹ about the quality of anti-DNA test kits is well founded. Single stranded regions were present in all the samples of labelled native DNA from different commercial sources examined by Medoff.² Such defects increase binding values and decrease the specificity of the Farr test.

Since its introduction we have used routinely native ¹⁴C DNA from Amersham in routine immunoassays, though both the stability and the molecular weight distribution of this material are unspecified. Of the many batches purchased, one, specially treated to remove single stranded regions, gave generally lower serum binding values, with some close to zero. As most batches appear to be incompletely double stranded we have reluctantly adopted the Farr test for antibodies to ss-DNA, using heat treated material, despite its disadvantages. Though tests for antibody to native DNA may be valuable for prognosis and treatment, their diagnostic value is uncertain. Using phage derived native DNA Swaak *et al*³ found increased values were given by sera from patients who did not satisfy the diagnostic criteria for systemic lupus erythematosus.

The Crithidia luciliae immunofluorescence test is deservedly popular, but the problems of variation between observers and in the composition of the labelled antigen-serum remain. It may also detect anti-protein antibodies in some circumstances.

The stimulation of antibody production to native DNA may no longer be considered unique to systemic lupus

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erythematosus among the rheumatic diseases. Progress in the synthesis of DNA analogues and the identification of DNA determinants with monoclonal antibodies⁷ may, however, lead to a better understanding of the factors determining these immune responses and to improvements in the diagnosis and treatment of diseases in which they are detected.

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Tuberculosis and "sterile" pyuria

In the past "sterile" pyuria suggested the existence of tuberculosis of the urinary tract. In common with all forms of the dis-

ease the incidence of genitourinary tuberculosis has declined but the Medical Research Council survey of the notification of tuberculosis reported 154 such cases in the six months spanning the end of 1978 and the beginning of 1979.¹ These contributed 14% of all cases of non-respiratory disease.

"Sterile" pyuria is still common. To investigate the local situation every specimen received from general practitioners in the Cardiff area over a three year period which showed "sterile" pyuria was cultured for *Mycobacterium tuberculosis*. Between July 1979 and September 1982 a total of 803 samples were tested, of which three (0.4%) yielded *Mycobacterium tuberculosis*.

Urinary tract tuberculosis was therefore clearly not a major cause of "sterile" pyuria. A possible alternative explanation was that many of these patients had recently taken, or were still taking, antimicrobial agents at the time of sampling. A study of the request forms showed that antimicrobial treatment was mentioned in 161 (20.0%). One of the positive isolations came from this group.

Information on request forms is notoriously unreliable. All urines showing "sterile" pyuria were therefore tested for antimicrobial activity using a modification of the method described by Pelling,² and the actual findings were compared with the expected findings. The results are shown in the Table. They were discrepant in 47 (19.7%) of the 239 cases.

The local incidence of urinary tract tuberculosis in patients whose urine showed "sterile" pyuria was low, and so the cost effectiveness of surveying all such samples must be equally low. It is not possible to reduce the number of specimens requiring screening by excluding all those reported as being on antimicrobial therapy because one of our three cases came from this group and the accuracy of the reported data on the request forms is low.

Of the 11 bacteriologically proved cases of urinary tract tuberculosis which occurred in South Glamorgan between July 1979 and September 1982, three (27.3%) were detected as a result of this survey.

Such patients are unlikely to pose a major infection hazard to other members of the community, but all three cases detected by the survey were unsuspected clinically and one suffered complications which may have been related to his infection.

It is the practice of this laboratory therefore not to examine every specimen showing "sterile" pyuria for *Mycobacterium tuberculosis* but to advise local practitioners to consider the diagnosis of urinary tract tuberculosis when persistent unexplained "sterile" pyuria is observed.

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Batch screening method for detection of bacteriuria

While agreeing with Mr Kerfoot and his colleagues¹ that the increasing workload in urine microbiology places a considerable strain on laboratories, I believe that it is important that protocols for examining urine specimens should not give wrong, or unduly delayed, answers. I therefore have some reservations about the batch screening method which they describe. Firstly, and perhaps most important, I do not consider that it is possible for patients, especially women, to pass a mid-stream urine specimen into a small container of the size they use. If their procedure—and they do not say so—is that the urine is first passed into a container with a wide mouth, and then decanted, the cost of specimen collection must be greatly increased.

Secondly, since the boric acid preservation method was first described² further work³ has shown that the percentage of false negatives may be as high as 16%. Many would not consider it a satisfactory method of urine preservation, especially when definitive culture, as described by Kerfoot *et al*, may not be undertaken for up to 48 h after the specimen is collected.

This screening method inevitably delays definitive culture and sensitivity testing by at least 24 h. Kerfoot *et al* do not say

Comparison of expected and actual results of tests for antimicrobial activity in urine

	Antimicrobials mentioned on request form	
	Yes	No
Antimicrobials found in urine		
Yes	19	33
No	14	173