Letters and Comment

Contributors to this section are asked to make their comments brief and to the point. Letters should comply with the Notice printed on the inside back cover. Tables and figures should be included only if absolutely essential and no more than five references should be given. The Editor reserves the right to shorten letters and to subedit contributions to ensure clarity

Urinalysis before joint arthroplasty. To dipstick or not? That is the question

(Apologies to the Bard)

All patients undergoing joint replacement surgery should have any infection of the urinary tract excluded as this may predispose to haematogenous infection of the implant *(1)*. Urinary tract infection becomes increasingly common with advancing age, and in the elderly at least 20% of women and 10% of men have significant bacteriuria *(2)*. The majority of elderly patients with bacteriuria are asymptomatic *(3)*. This makes it vital to exclude urinary tract infection before joint replacement surgery if the additional risk of implant infection is to be excluded. Traditionally, the gold standard used in the diagnosis of urinary tract infection has been the microscopic analysis and quantitative culture of a midstream specimen of urine. In recent years urine reagent strips have been made available that test for two markers of infection: leucocyte esterase (a neutrophil granulocyte enzyme) and nitrite (the product of bacterial breakdown of dietary nitrates excreted in urine). Both of these tests when used alone has relatively poor sensitivity; however, if *all* markers of infection (turbidity, proteinuria, haematuria, nitrite and leucocyte esterase) are negative, the reagent strip test becomes a reliable method of excluding urinary tract infection, although this is at the expense of specificity *(4,5)*. Barker *et al. (4)* and Hiscoke *et al. (5)* found negative predictive values of 97.2% and 98.5%, respectively. At the Royal National Orthopaedic Hospital we investigated the accuracy and cost-effectiveness of adopting visual and reagent strip urine testing as a screening method for patients attending our preadmission clinic before joint replacement surgery.

The midstream specimens of urine of 189 consecutive patients were tested with a reagent strip (NephurTest and Leucocytes, Boehringer Mannheim, UK). The urine specimens were also sent to the microbiology laboratory for microscopy and culture—the staff of the laboratory were unaware of the results of reagent strip testing. The reagent strip test was positive in 52 (27.5%). Significant bacteriuria was found in 11 (5.8%) of the 189 specimens, all of which had been picked up by reagent strip testing.

Each of the parameters that we used to indicate possible infection (turbidity, nitrite, leucocyte esterase, proteinuria and haematuria) has relatively poor sensitivity when used alone, but the sensitivity was found to be 100% when used in combination.

With negative predictive values in excess of 97% *(4,5)*, a positive chemical reagent strip test together with visual analysis can safely be used as a prerequisite for routine urine microscopic examination. If urine samples were selected for processing on this basis, the number of urine samples that need to be sent to the microbiology laboratory would be reduced by approximately 75%. There are obvious financial implications since the cost of routine processing of a midstream urine specimen is approximately 20 times greater than the cost of a reagent strip. This cost is further increased by the cost of portering and transport of the specimen and results. We can therefore recommend the use of reagent strip testing as a cost-effective screening technique for the exclusion of urinary tract infection in orthopaedic patients.

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Complications of laparoscopic surgery

The majority of the complications of laparoscopic surgery are well described. We have recently had experience of, to my knowledge, a hereto undescribed complication.

During an otherwise straightforward laparoscopic cholecystectomy on a short female patient weighing 80 kg, an operative cholangiogram was being performed. The operating table was in our usual position; head up with left lateral tilt. Suddenly, and quite without warning, the patient slipped sideways off the table onto the theatre floor, dragging all the equipment with her. The theatre was necessarily depopulated because of the use of X-rays, hence there was no one to break the patient's fall. Thankfully, she did not sustain so much as a scratch and was merely bemused when told of her adventure.

The purpose of reporting this event is twofold. First, to see if any colleagues have had the same experience and, second, to make colleagues aware of the potential risk.

We believe a number of factors contributed to this event. Frequently, particularly in the obese, the angle to which the table is tilted may become extreme in the search for the elusive field of view. Further, we are reliably