

pyruvate, which is converted to carbon dioxide and water in the citric acid cycle. Peritoneal dialysate contains a racemic mixture of both D and L isomers of lactate and mammals lack D-lactic dehydrogenase and are slower in metabolising D-lactate.<sup>3</sup>

There is only one previously reported case of lactic acidosis in a patient receiving peritoneal dialysis, which like our case was related to metformin.<sup>4</sup> Severe lactic acidosis has a mortality of about 80% despite treatment. Acetate and bicarbonate are alternatives to lactate as buffers for peritoneal dialysate. The use of acetate, however, has largely been abandoned because of its association with loss of ultrafiltration and sclerosing encapsulated peritonitis.<sup>5</sup> Bicarbonate would be the ideal buffer but solutions containing bicarbonate are difficult to prepare and sterilise because of precipitation of insoluble calcium salts. It is, however, possible to prepare bicarbonate based dialysate for use in patients with lactic acidosis.<sup>6,7</sup>

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## “Postretirement polydipsia” mimicking prostatism

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Exclude excessive drinking as a cause of urinary frequency before considering prostatic disease

Frequency of micturition is a common symptom of bladder outflow obstruction, but it may merely reflect polyuria. We describe two patients referred for consideration of prostatic surgery in whom the frequency developed shortly after retirement from full time work. In each case the frequency was caused by excessive drinking and responded to a reduction in fluid intake.

*Case 1*—A 67 year old man presented with a two year history of frequency and nocturia. He passed urine seven times a day and twice by night. There was no hesitancy or dribbling but he described the stream as poor. He had retired two years earlier. Rectal examination showed a large smooth prostate gland. Maximum urinary flow rate was 15 ml/s. There was no glycosuria and the serum creatinine concentration was normal. The urine was sterile. A daily fluid intake-output record kept for one week showed an average fluid intake of 4 litres a day, mostly of tea. After reducing his fluid intake to 2 litres a day the frequency improved to four times a day and once at night. He was satisfied and was discharged.

*Case 2*—A 63 year old man presented with an 18 month history of frequency and nocturia. He passed urine eight times a day and three times at night. He complained of hesitancy and described the stream as moderate. Two years earlier he had retired. Rectal examination showed a moderately enlarged prostate. Maximum urinary flow rate was 11 ml/s. There was no glycosuria and the serum creatinine concentration was normal. The urine was sterile. A daily fluid intake-output record kept for one week showed an average fluid intake of 4.5 litres a day, mostly of tea. After he halved his consumption of tea the frequency improved to five times a day and once at night. He was delighted and was discharged.

### Comment

Fifteen to 20 per cent of elderly men will at some time undergo prostatic surgery,<sup>1</sup> and in 70% frequency will be a presenting symptom.<sup>2</sup> In the presence of hesitancy and low urinary flow rates frequency is usually explained by bladder outflow obstruction, and medical or surgical treatment will usually be effective.<sup>2</sup>

Frequency may, however, be caused by polyuria, detrusor instability, or urinary tract infection. In these conditions surgery is helpful only if there is evidence of

bladder outflow obstruction. Polyuria may reflect underlying organic disease such as uraemia, diabetes, or hypercalcaemia, or it may be secondary to excessive drinking. Polydipsia is readily identified from daily fluid intake-output measurements recorded for one week by the patient. Both these patients had fluid intakes exceeding 4 litres a day. Neither had evidence of severe bladder outflow obstruction on urinary flow rate testing (normal maximum flow rate is about 18-30 ml/s), although both had complained of a poor urinary stream and had moderately enlarged prostates on rectal examination. Both were surprised by the evidence of the fluid charts but admitted that since retirement they had had more opportunity to “relax with a cup of tea.”

Attention has recently focused on the delays that patients may face before a urological outpatient consultation.<sup>3,4</sup> One solution is to investigate and treat patients in the community. As retirement and benign prostatic hypertrophy often occur simultaneously in a man's life and may produce similar symptoms, we recommend that “postretirement polydipsia” is excluded as a cause of frequency before referral to a urology service. The diagnosis is easily made on the basis of a frequency-volume chart. If the true cause of the frequency turns out to be a large fluid intake then even severe symptoms may be relieved promptly by reducing intake—at no cost and without resort to drugs or surgery.

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### Correction

#### Assessment of thyroid status in elderly people

This fortnightly review by Peter Rae *et al* (17 July, pp 177-80) was commissioned by the Association of Clinical Biochemists, although this fact was omitted from the published review.

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