parathyroidism.² But iPTH (carboxy-terminal) concentrations are normal in the patients.

The data leads us to propose that bone in these patients is more sensitive to PTH as are kidneys as shown by Heath's demonstration of raised urinary cyclic AMP/iPTH ratios.³ Increased sensitivity in more than one PTH target organ can be accounted for by proposing an abnormality of either PTH or its receptors. There is no evidence for the former in familial hypocalciuric hypercalcaemia.⁴ Adenylate cyclase is involved in the control of PTH secretion by parathyroid glands⁵ and is part of the complex regulating its action on target cells.⁶ Our hypothesis is that genetically altered adenylate cyclase modifies the bone and kidney response but does not suppress PTH secretion in response to hypercalcaemia. In such a way familial hypocalciuric hypercalcaemia would be a true pseudo-hyperparathyroidism, the opposite pattern of Albright's syndrome.⁷ More studies are needed to investigate this hypothesis.

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Mean platelet volume changes in infection

Van der Lelie and van dem Borne report an increase in mean platelet volume (MPV) during episodes of septicaemia.¹ We believe that another pattern of change in platelet size may occur during infection. In a recent survey of 372 cases of thrombocytosis² we studied the temporal relationship between MPV and platelet count in 10 patients with marked episodes of thrombocytosis due to bacterial infection. All measurements were made on a Coulter Counter Model S Plus. In all 10 patients MPV fell as the platelet count rose. The peak platelet count was $212 \pm 63\%$ (mean $\pm$ SD) of baseline platelet count and the minimum MPV was $80.2 \pm 5.1\%$ (mean $\pm$ SD) of baseline MPV. On average the peak platelet count occurred 10 days after the onset of infection and the lowest MPV was seen one day after the peak platelet count. We conclude that at least two patterns of platelet size changes are possible in response to infection: an early rise in MPV seen in severe infection such as septicaemia (this may be associated with thrombocytopenia) and a later fall in MPV seen in patients with sustained bacterial infection and associated with thrombocytosis. It is possible that the early rise in MPV is due to rapid release of large platelets from the spleen³ rather than shape changes occurring in the circulation. The cause of the fall in MPV in reactive thrombocytosis remains enigmatic, but does not relate to platelet age.

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Bacteriuria in patients undergoing prostatectomy

Dr Williams and Dr Hole¹ state that a knowledge of the prevalence of different bacteria helps in the choice of a suitable chemoprophylactic agent. We agree, but believe that there are more important considerations.

Septicaemia, much the most dangerous complication of infection in these patients, is almost entirely confined to patients with preoperative bacteriuria and to those who develop bacteriuria before removal of the catheter after operation.²⁻⁴ Because of the variability of the infecting bacteria, and of their sensitivity, no predetermined drug can be relied upon to give certain protection against septicaemia—as can be seen from Table 3 of Dr Williams's and Dr Hole's paper.¹ The only reliable method is to select an appropriate systemic antibiotic from the results of a urine culture and direct sensitivity test put up one or two days before operation, so that the results are available in the ward before the patient goes for operation. If the urine is infected, an appropriate systemic antibiotic is administered at or before premedication. Occasionally, two drugs are required in some patients with mixed infections. Since septicaemia is sometimes provoked by catheter removal, antibiotic administration should be extended, or repeated, to cover this event.⁴ Experience in Bristol and in Dublin shows that this system is quite practicable and gives reliable protection against septicaemia.⁴

If the preoperative urine is not infected, we believe it is, on balance, better to avoid using systemic antibiotics prophylactically, because of the risk of, sooner or later, promoting infection by resistant organisms,⁵⁻⁷ and because postoperative infection is less dangerous than preoperative, and is usually easy to treat after a successful operation. However, we believe that prophylaxis by means of nitrofurantoin may be justified in these patients, since it is not systematically active. In a recent pres-

Letters to the Editor

pective, controlled study, we found that nitrofurantoin, administered orally from the first postoperative day until the catheter was removed, was highly effective in preventing bacteriuria in patients who had come to operation with uninfected urine.⁸

In conclusion, we agree a knowledge of the prevalent bacteria in urinary infection is helpful but to rely on this alone in selecting agents to prevent postoperative septic complications is insufficient and may be dangerous.

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Dr Williams comments as follows:

While agreeing that detection of bacteriuria and its treatment with an appropriate antibacterial agent at or before premedication is important, I cannot accept that this is an over-riding consideration. Admission procedures in some Units^{1,2} make this difficult to achieve and, as Gil-

lespie *et al* state themselves, septicaemia also occurs in patients developing bacteriuria after operation; in Glasgow, bacteriuria arising postoperatively was more common than preoperative bacteriuria.³

Lengthy therapeutic courses of treatment are probably more likely to give rise to organisms resistant to multiple agents than short courses of chemoprophylaxis.⁴ If it is accepted that infection may occur after screening, or that screening may not be complete by the time of operation, then it is important to use a systemic agent which is effective "therapeutically" as well as "prophylactically". Obviously no predetermined drug or drugs can be relied upon to cope with every instance but our study³ assists a choice.

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Detection of bacterial antigens in cerebrospinal fluid

We read Dr Tompkins' article on the detection of bacterial antigen in cerebrospinal fluid (July 1983) with interest.¹ Whilst agreeing that the coagglutination (COA) test does have advantages over counterimmunoelectrophoresis in terms of speed and ease of carrying out the test, we do have some reservations in the light of our recent experience. We examined specimens of CSF from two patients with meningitis, in both cases abundant polymorphs and Gram-negative diplococci were seen and *Neisseria meningitidis* (group B) was obtained on culture. The Phadebact COA test was carried out on the fresh CSF according to the manufacturer's instructions. In neither case did the COA test detect meningococcal antigens. In con-

trast, testing the same specimens by CIE enabled us not only to detect meningococcal antigen but also to group the meningococci. This discrepancy is undoubtedly a reflection of the quality of the antibody used, perhaps that used in the Phadebact system should be replaced by one of higher affinity.

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Freeze dried cryoprecipitate and home therapy

The paper by our colleagues Hambley *et al*¹ on freeze dried cryoprecipitate contains some reservations on its suitability for home therapy of haemophiliacs. Although the product used in this trial was recommended for reconstitution in 100 ml, it does reconstitute rapidly in 50 ml distilled water. The 860 units used per patient could easily be given in a total volume of as little as 100 ml.

The preparation procedure of the newer batches was modified to provide a more concentrated product with an average dose of 430 IU per bottle in a volume of 50 ml.² Twelve batches of NHS intermediate FVIII concentrate recently used in this region had between 190 and 380 IU FVIII per bottle. Reconstitution volumes ranged from 20 to 50 ml with a final FVIII concentration of 7.6-12.8 IU/ml. The equivalent of 860 IU (two bottles of dried cryoprecipitate) used in this study could therefore have been given as three or four vials of intermediate concentrate in a final volume ranging between 67 and 113 ml depending on the batch in use. The other dose of 500 IU in 20-30 ml mentioned in the discussion of the paper could only be provided by a higher purity concentrate with a potency around 20 IU/ml.

An additional feature of dried cryoprecipitate, not mentioned in the paper, is that it is a small pool product and we believe like many others^{3,4} that its use reduces the rate of exposure to hepatitis