urinary excretion of calcium even when differences in glomerular filtration rates were disregarded. As possible explanations for their observation of maximum excretion during the period May–September, with a zenith in July or August, they mentioned changes in dietary calcium intake and the seasonal variations which the serum level of 25-hydroxycholecalciferol (25-\text{OHCC}) is known to undergo, or possibly a combination of both, since the zenith of serum 25-\text{OHCC} occurs later than that of the urinary calcium excretion.

We have studied the same problem by performing simultaneous determinations of the 24-hour urinary calcium excretion and the 24-hour clearance of creatinine in 26 healthy volunteers taking a standard diet. The estimated contents of this diet were 800 mg of calcium, 900–1100 mg of phosphorus, and 60–140 mmol (mEq) of sodium per day and 1 g of protein per kg body weight per day. There were 17 male subjects aged 21–29 (average 24) years and nine females aged 22–28 (average 24) years. Twelve, including five females, were studied from May to September inclusive. Assessment was undertaken as well as the 24-hour urinary calcium excretion, both uncorrected (UCaV mg/24 h)), and corrected for variations in the clearance of creatinine (Ccr (ml/min)) according to the formula (UCaV \times 100)/Ccr. The importance of relating UCaV to Ccr in one or another has been stressed repeatedly. As evaluated by Student's t test the clearance-corrected excretion was found to be significantly higher during summer, the mean (± S.D.) being 25.5 ± 4 mg/24 h as against 165.37 mg/24 h during the winter (t = 3.115, P < 0.01). The figures for uncorrected excretion were 230 ± 66 mg/24 h and 199 ± 47 mg/24 h respectively (t = 1.40, P > 0.10).

Despite the small number of observations the monthly averages displayed a pattern (see fig.) very similar to that so nicely presented by Dr. Robertson and his colleagues.

This pattern was recognizable even when males and females were considered separately.

Our observations indicate that seasonal variations in the daily urinary excretion of calcium may take place independently of dietary changes. — We are, etc.,

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Lever Flukes: a Warning

Sr.,—I would like to correct a point in Dr. A. T. Hunt's letter (1 March, p. 510) dealing with liver flukes. The Tidemham epidemic in fact occurred in the winter of 1968–9 and not in July 1972 as he states.—I am, etc.,

A. H. Davies
Chepstow, Gwent

Sr.,—I have been informed by a patient received in a consulting room that the use of antischistosomal agents is associated with a transient “one-shot” immune complex nephritis. For the last year she has been referred to me at intervals of about 150 000 units of the drug without any untoward effects. This pattern was recognized even when males and females were considered separately.

Our observations indicate that seasonal variations in the daily urinary excretion of

Schistosome Antigen in Transplanted Kidney

Sr.,—I was enlightened to read of the demonstration of circulating soluble antigens and antibody in schistosomiasis by Drs. M. A. Madwar and A. Voller (22 February, p. 435). I have recently treated a patient with a long history of schistosomiasis (Schistosoma mansoni), nephrotic syndrome, and ultimate renal failure. Renal biopsy and nephropathy studies revealed the glomerular hallmarks of immune-complex nephropathy. The patient received a renal transplant and subsequently underwent antischistosome therapy with niridazole. He developed a transient “one-shot” immune complex nephritis. With the use of specific antischistosomal adult worm antisera the antigen was revealed in the glomerular mesangium of the transplant biopsy. Thus that “prerequisite for immune-complex disease” has been found in the kidney. These studies will soon be reported in full elsewhere.—I am, etc.,

Daniel B. Gould
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Abuse of Fenfluramine

Sr.—Fenfluramine has been considered to be not a drug of abuse, because of initial unpleasant side effects. Hawkins found no evidence of its abuse among addicts associated with the addiction research unit. Götestam and Gynne showed that amphetamine-dependent subjects had no preference for fenfluramine against placebo. However, Levin described 60 drug-dependent young males who claimed to have used fenfluramine as a drug of abuse. Euphoria, derealization, and perceptual changes were reported effects. I wish to report a case of fenfluramine abuse.

The patient, a 28-year-old woman, was referred because she had been taking prescriptions for fenfluramine for the past six months. She had begun taking fenfluramine four years previously when her weight was about 170 lb (77 kg) and her height 60". She had used fenfluramine intermittently for nausea, vomiting, dizziness, and drowsiness on dosages of 80 mg a day. Weight loss was quite rapid, and for the past year she had remained at about 115 lb (52 kg). Her longest period of abstinence was six months. In the past seven months while taking on average 240 mg of fenfluramine daily she had noticed feelings of euphoria, excess energy, and little need for sleep. There was increased appetite and libido. There were no obsessional-compulsive symptoms. She found alcohol potentiated the effect of fenfluramine-induced euphoria. During this seven-month period she noticed increasing tolerance to the dosage. She had forged prescriptions, but three or four did not appear to have been having any other drug.

The patient's desire to lose weight was sufficient to overcome the initial unpleasant side effects. This pattern has been observed with other classical drugs of abuse—for example, morphine. There is little reference in the literature to the very obvious stimulant effect of fenfluramine found in this case.—I am, etc.,

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Serum Muramidase Activity in Untreated Cancer

Sr.—With interest I read the paper by Professor E. H. Cooper and others (14 September, p. 662) on raised serum muramidase levels in colorectal cancer. They consider that the raised muramidase activity results from stimulation of the reticuloendothelial system. It is accepted that muramidase is mostly derived from disintegrating granulocytes and that serum muramidase levels are an index of granulocyte destruction. When granulocyte production equals destruction muramidase levels are also an index of granulocyte bone marrow production, and they have been used for monitoring recovery of granulopoesis in patients with neutropenia. The levels, however, were unreliable in subjects with fever and bacterial infection, since in cases of bacterial infection serum muramidase levels are raised owing to increased destruction.

We measured by the turbidimetric method of Litwack the serum muramidase levels in 120 patients with various untreated malignant tumours, including 20 cases of colorectal cancer, and compared them with the controls in 50 normal subjects. All controls were within the normal range and there was no significant difference between the patients and the controls. This agrees with the findings of Jolles et al. Our patients with colorectal...