cases diagnosed as angiosarcoma over the period 1950-75. Histological sections were seen by three pathologists, who concluded that there were only nine definite (seven men) and one possible angiosarcoma of the liver. Among these was an angiosarcoma in a woman on long-term arsenic medication—a well-known association. Angiosarcomas associated with Thorotrast were not considered; two other angiosarcomas originated in the spleen. There were 14 non-vascular tumours of miscellaneous origin, and in one case no tumour was seen. Age at death of the nine angiosarcoma patients varied between 46 and 73.

Our nine cases occurred in a fluctuating population of 10-14 million, with at least 40 000 necropsies. None of our 27 patients had any traceable contact with vinyl chloride.

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[1] Dalderup, L. M, *et al*, *Lancet*, 1976, **1**, 246.
[2] Dalderup, L. M, *et al*, *Tydschrift voor Sociale Geneeskunde*, 1976, **54**, 335.

## Rabies: a European on-going phenomenon

SIR,—It is probably true to say that in the present rabies epizootic many of your readers in the British Isles and in Europe will have their attention fixed mainly on two main vector hosts—namely, the red fox and the domestic dog. This is reasonable and logical in view of what we know and experience in Europe.

In the past few weeks, however, we have seen three shiploads of grain returned to mainland Europe because of beetles, and a few days ago a Mexican red knee spider rumoured to be capable of dealing with small mice and rodents came ashore from a banana boat. Could it possibly be that we do not know or realise as yet the full ecological and epizootiological potentials of the rabies virus and its hosts, and that we may be keeping anxious watching briefs on the creatures than run or fly and disregarding those that creep and crawl?

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## Presacral air insufflation in renal failure

SIR,—The clinical differentiation between patients with acute renal failure and those with chronic renal failure is sometimes difficult. It is important that this distinction be made quickly, especially when only acute dialysis facilities exist.

Radiological evidence of bilateral contracted kidneys would favour a diagnosis of chronic end-stage renal disease. A plain film of the abdomen in a uraemic patient is often unsatisfactory and I have found that presacral air insufflation (retroperitoneal pneumography) in such a case gives an excellent picture of the kidney outlines. Even though it is regarded by some as obsolete, I feel that this procedure is a quick and easy method of visualising the kidneys, especially in places where retrograde pyelograms, tomograms, and renal scintiscans have yet to appear on the horizon. In the past two years I have performed this procedure successfully on 40 patients. It is simple and there have been no complications. If care is taken during the injection of air the risk of air embolism is almost non-existent.

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## Exercise-induced asthma

SIR,—I am grateful for the comments of your correspondents Dr J P R Hartley and coworkers and Dr Elizabeth R Miller (15 October, p 1025). I fully agree with the former that the energetics of different types of exercise cannot possibly be compared. Whether a patient will breathe off $CO_2$ in excess will depend very much on his personal characteristics—hyperventilation asthma also cannot be elicited in all patients, but more easily in adolescents. I am also sure that hypocapnia is not the only cause of exercise dyspnoea in asthmatics.

I am glad that Dr Miller has also found an increase in lung resistance at the maximum of the postexercise hypocapnia. That he could not prevent it by $CO_2$ breathing may have its reason in its timing. It ought to start immediately after the end of the exercise.

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SIR,—It appears to me the answer to exercise-induced asthma (27 August, p 536) is buried in the riddle: "Why with running but not with swimming?"

My suspicion is that it has to do with "air-trapping." Air-trapping occurs with abnormal function of the smaller bronchial tubes. It is accentuated by incorrect use of the diaphragm. We runners have discovered that belly breathing and exhaling against pressure does prevent one symptom of air-trapping—the "stitch." We are simulating what swimmers do naturally, especially in the prone position: they belly breathe and exhale against pressure. The leaning forward position adopted by cyclists also promotes belly breathing.

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## Photo-onycholysis caused by photochemotherapy

SIR,—Onycholysis is a common nail disorder which may arise from local causes or may complicate a variety of cutaneous and systemic diseases. As mentioned by Dr Harvey Baker (20 August, p 519), photo-onycholysis is a well-recognised complication of therapy with some tetracycline derivatives. We have also seen it develop in a patient with porphyria variegata. Recently photo-onycholysis has been described in two patients receiving oral 8-methoxypsoralen and sun exposure for vitiligo.[1]

We wish to report photo-onycholysis occurring in many digits in a patient undergoing therapy with oral 8-methoxypsoralen and long-wave ultraviolet light (PUVA) for mycosis fungoides. Onycholysis is not a feature of mycosis fungoides, and other causes were excluded. Reattachment to the nailbed occurred after the nails were protected with a reflectant light barrier cream during irradiation with black light.

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[1] Zala, L, *et al*, *Dermatologica*, 1977, **154**, 203.

## Hyperglycaemia and complications of diabetes

SIR,—I read with great interest the article of Dr C J Fox and others (3 September, p 605) describing the renal changes produced in diabetic rats. They explain their findings on the basis of hyperglycaemia. Twenty years ago we[1] produced similar renal lesions in non-diabetic rats by administering to them insulin and glucose alternately for several weeks. We postulated that the renal lesions were due to the drastic changes in blood sugar. Since pituitary or adrenal ablation partially prevented the renal lesions, we thought that perhaps corticosteroids played a role in their production.

The conclusions of Fox and his colleagues are much the same as ours were twenty years ago, that poor diabetic control may lead directly to renal damage. While they feel that hyperglycaemia per se is the main factor, in our experiments the wide fluctuation of plasma glucose was responsible, since we were able to produce renal lesions, including basement membrane thickening, in the absence of diabetes. We contended, therefore, that for good diabetic control not only hyperglycaemia must be avoided but frequent blood sugar fluctuations as well.

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[1] Goth, A, *et al*, *Acta Medica Scandinavica*, 1957, **158**, 475.

SIR,—The results of some of our recent studies on the "diabetic kidney" are relevant to those reported recently by Dr C J Fox and others (3 September, p 605). We have confirmed the observation of Cohen and Rosenmann[1] that the feeding of rats with diets containing sucrose produces a thickened glomerular capillary basement membrane such as Dr Fox and his colleagues have produced with streptozotocin. We find[2] also a fusion of the foot processes, changes in the mesangium, and nephrocalcinosis. The kidney is enlarged and the urinary excretion of *N*-acetyl glucosaminidase is increased[3]—an additional indication of renal damage.[4]

We would stress that these abnormalities are produced not by injection of a specific diabetogenic agent like streptozotocin but by the feeding of a "normal" diet rich in sucrose. Secondly, although such a diet does produce a diminished glucose tolerance in our rats, it is of mild degree and the blood concentration of glucose is only slightly raised. We doubt therefore whether the thickening of the basement membrane, at least that produced by a sucrose-rich diet, is due to hyperglycaemia alone, as suggested by Dr Fox and his colleagues for the action of streptozotocin.

Finally, may we make a plea to these workers and to all others who describe the diets in their