Moreover, Dr O'Brien's symptoms, which were late in onset and lacked the intense burning pain usually felt at the site of contact with physalia, are suggestive of a less potent stinger.

The most likely animals to have stung Dr O'Brien are the true jellyfish. They swim throughout the water column and consequently are less obvious to bathers than physalia, which is tied to the surface by its iridescent-blue float. The lion's mane jellyfish *Cyanea capillata*, made famous by Conan Doyle in *The Adventure of the Lion's Mane*,⁵ is the most probable culprit; it stings more severely than the other common species⁶ (but less so than physalia) and it was abundant nearby on my only visit to the area in 1977 (September). In addition, its dense brush of fine tentacles could readily cause the type of lesion described by Dr O'Brien, whereas the long, heavily-armed tentacles of physalia might be expected to leave streak marks. Other possibilities are *C. lamarckii*, *Chrysaora isoscela*, and *Rhizostoma octopus*. On the grounds of distribution, behaviour, and symptoms any of these would be more likely than physalia.

Ironically, the man-o-war's more potent sting might have provided Dr O'Brien with a less gruelling diagnostic challenge.

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⁴ Joyce, J, *Ulysses*. London, The Bodley Head, 1960.

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Factor VIII-related protein in renal failure with prolonged bleeding time

SIR,—I thank Dr G Remuzzi and his colleagues for acknowledging the use of our method for immunohistological localisation of factor VIII-related protein in their admirable study in renal disease (14 January, p 70). Of course, protein localised by the method could exhibit normal, increased, or decreased activity relevant to haemostasis. For instance, some patients with von Willebrand's disease with grossly prolonged bleeding times have normal plasma levels of the protein as measured by electroimmunoassay although it does not seem to function effectively. I agree with Dr Remuzzi and his colleagues that care should be taken in interpreting immunohistological appearances in functional terms.

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Country health

SIR,—In your leading article on this subject (24-31 December, p 1621) you state that there is no recognised body to study the hazards of farming from the point of view of employees. This is not so. Within the Health and Safety Executive there are two discreet but related bodies with wide-ranging responsibilities in this area. The Employment Medical Advisory

Service is already involved in the study of agricultural hazards and the Agricultural Safety Inspectorate has for many years identified the hazards of agriculture and acted to prevent them.

Since the formation of the executive the employment medical advisers have had responsibility to investigate and follow up any reported cases of prescribed or notifiable disease occurring in agriculture and for, the past two years to investigate suspected cases of pesticide poisoning.

The Agricultural Safety Inspectorate, which has been in existence for many years, has now been transferred from the Ministry of Agriculture, Fisheries and Food to the Health and Safety Executive and closer contact between the inspectorate and the Employment Medical Advisory Service is already leading to more medical investigation of agricultural hazards.

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Rapid calculation of children's fluid requirements after cardiac surgery

SIR,—In intensive care units it is common practice to calculate the daily fluid requirements of children on the basis of body surface area. From this the hourly rate of intravenous fluid is calculated. If the required amount is 1000 ml/m²/24 h a quick method of calculating the hourly rate is to multiply the surface area of the child by 40. For instance, a child of 0.75 m² would require 30 ml per hour or an infant of 0.03 m² would require 12 ml/hour.

Since, after open heart surgery, it is customary to give 750 ml/m²/24 h for the first day, 1000 for the second day, and 1250 for the third day the multiplication factors would be 30, 40, and 50 respectively. For those more mathematically minded than myself, it will be evident that for 30, 40, and 50 to be correct the equivalents would be 720, 960, and 1200 ml/m²/24 h, but the difference in the final calculation is small and this slight underestimate can be adjusted if necessary. For small children and infants the underestimate has the advantage that it avoids the risk of giving too much intravenous fluid.

It is suggested that this method has the advantages of simplicity and speed and of minimising errors of calculation.

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Arthritis simulating thrombosis on urokinase scan

SIR,—I read with interest the report by Dr G P McNeill and others (14 January, p 81) which demonstrated abnormal uptake of ^{99m}Tc-urokinase in arthritic knees. It has been shown that urokinase labelled with ^{99m}Tc loses the radioactive marker quite rapidly in vitro and in vivo both in experimental animals and in patients.¹ In vitro approximately 50% of the technetium label disassociates from urokinase in one hour at room temperature. Free technetium as pertechnetate is used as a joint-scanning agent, acute forms of arthritis in general showing positive uptake.^{2 3} I would

like to venture the opinion that the abnormal joint uptake was not due to labelled urokinase but to free ^{99m}Tc.

For accuracy, I would like to correct an error in the comments of Dr McNeil and his colleagues, who state that ^{99m}Tc-urokinase localises in blood clots and quote the work of Alkjaersig *et al* in 1959.⁴ These investigators did show that urokinase localises in blood clots, but they certainly did not show that ^{99m}Tc-labelled urokinase localised there. Technetium was not "discovered" until several years after that work.^{5 6} It also has been shown that urokinase labelled with technetium does not retain the biological activity of unlabelled urokinase and almost certainly fibrinolytic activity is lost during the labelling process.²

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Medicine and apartheid

SIR,—At a time of increasing concern about repressive measures taken by the South African Government we should like to point out some examples of the effect of apartheid on people who practise medicine in South Africa.

The death of Steve Biko has been widely publicised. However, it is not well recognised that Mr Biko was a medical student at the University of Natal until he was expelled after becoming politically active. In the words of Dr Kurt Waldheim, "he suffered constant persecution, but was never convicted of any offence, even under arbitrary South African laws." As Professor R Hoffenberg has pointed out (14 January, p 112), one of the doctors concerned "admitted that he wrote out a 'highly incorrect' medical certificate" on Biko following his imprisonment at the request of a security police colonel, in grave violation of professional ethics.

Among other cases, of which details have been obtained by Amnesty International, are the following.

Dr Hoosen Haffeejee, a dentist from Durban, was arrested in August 1977 and reportedly found hanged in his cell four hours later. Although the police allege suicide, Dr Haffeejee's family consider this unlikely, and, being a Muslim, he would have been averse to suicide on religious grounds. Photographs of Dr Haffeejee's body showed multiple injuries of recent origin, probably inflicted with a blunt instrument shortly before his death.

Dr Maitshwe Mokoape, of the King Edward VIII Hospital, Durban, was arrested in 1974 after an attempt had been made to organise a political rally. After three months' detention without charge, during which he was physically ill-treated, he was brought to trial, convicted, and sentenced to six months' imprisonment. He is now held in the notorious Robben Island prison.

Dr Mamphela Ramphele, superintendent of the Zanempilo clinic at King William's Town, was detained without trial from August to December 1976 after attending a post-mortem examination of a prisoner who was alleged to have committed suicide. Although a charge has never been brought against her, she has been banned and restricted to