of the skin, post-mortem examination revealing massive haemorrhages in the suprarenal glands in all cases. Death occurred so rapidly that involvement of the meninges appeared to have no time to occur and in only one case can I recall the cerebrospinal fluid being slightly opalescent.

There is obviously in this syndrome an overwhelming bacteraemia, and in one case I was able to demonstrate diplococci in a blood film, at least half a dozen being visible in each field; these were easily identified and were not artifacts. Diagnosis is exceedingly difficult unless there is an epidemic of cerebrospinal fever at the time and the medical attendant is aware of this fairly uncommon syndrome. Confirmatory diagnosis by blood culture is much too late.

A letter appeared in your correspondence columns during 1941¹ describing what would appear to have been a fairly typical case of Friderichsen-Waterhouse syndrome occurring in the West Country and labelling it malignant measles. About six months earlier an article had appeared in the *B.M.J.*² giving a full description of the disease under discussion.

It would appear that this unfortunate woman was incubating a fulminating meningococcal infection on her admission to hospital, the extensive haemorrhages into the suprarenals causing her rapid deterioration and fatal termination.

It would be very interesting to learn whether there were any cases of cerebrospinal meningitis in the community at the time of this woman's death, the size and nature of the community, and the season of the year.

Only chemotherapy and deoxycortone acetate (D.O.C.A.) were available in 1940, and it would be of interest to learn whether there have been any cases of recovery since the advent of more potent bactericidal agents, cortisone, etc.—I am, etc.,

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REFERENCES

- ¹ Baker, Audrey Z., *Brit. med. J.*, 1941, 1, 380.
² Hughes, J. F., *ibid.*, 1940, 2, 353.

Diet and Ischaemic Heart Disease

SIR,—I should like to comment on the paper by Dr. G. A. Rose and others (12 June, p. 1531).

In the United States we have just concluded the first phase of the National Diet-Heart Study, which involved several thousand men. Two years of intensive discussion and planning preceded the study. During these discussions consideration was given to the thought of studying patients who had had actual heart attacks. For several reasons such an undertaking was not approved. Among the reasons were the following:

(1) The statisticians advised us that a very large number of subjects would be necessary in order for findings to have any possible statistical significance.

(2) By the time a man has a heart attack there is a large probability that the nature of his pathology will be essentially irreversible regardless of what one may do; that is, one is dealing to a large degree with fibrocalcific

lesions which would have little likelihood of responding to diet. Another way of stating this is that if one wishes to evaluate the effect of diet upon atherosclerotic lesions the time to do so is many years before the lesion has become symptomatic.

I believe that I am correct in saying that the data presented by Dr. Rose and his collaborators have no statistically or biologically significant meaning. It is unfortunate that they may mislead many people.—I am, etc.,

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Jaundice in Severe Infections

SIR,—With reference to the article by Mr. A. Eley and his colleagues (10 July, p. 75), reporting five cases of jaundice associated with severe infections, in some places it is commonplace. For example, I remember in Bulawayo, Rhodesia, not a malarial area, that many previously apparently healthy young African adults with acute pneumonia developed jaundice, and also in some the jaundice was seen before the physical signs in the chest developed. Clain and Gelfand¹ investigated a few of such cases without finding evidence for haemolysis or cholestasis.—I am, etc.,

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REFERENCE

- ¹ Clain, D., and Gelfand, M., *Centr. Afr. J. Med.*, 1964, 10, 217.

Beds for the Dying

SIR,—One of the sad results of the shortage of beds at teaching hospitals is the break in the doctor-patient relationship which occurs when one of their terminal carcinoma cases becomes in need of care. It is very undermining for some of the patients, especially those in the younger age group, to find that when they have to be admitted into hospital because of increasing pain or necessity for nursing they must often go to another hospital without previous warning.

One such patient recently reached one of my beds. She was only 45 years old, and it was some time before the Emergency Bed Service could find a suitable bed. One realizes that it is absolutely essential to give priority to carcinoma patients needing treatment, and in whom there is a possibility of response, before these terminal patients. Wouldn't it be possible for them to be admitted into a medical bed as an emergency, as is done, for instance, with acute bronchitis, and if necessary be moved to a terminal home from the parent hospital? Or, alternatively, more use could be made of the waiting-list for these homes by almoners in co-operation with the relations before the need arises.

The present situation is one that general practitioners find distressing, and it might be that more cases would be sent to the teaching hospitals if this difficulty was overcome. Surely sometimes personal concern for the comfort of the patient is as important as

treatment of the disease. The hospital concerned in this case, and in others in which the problem has occurred before, are always kind and helpful in other respects, and it seems only the fear of a blocked bed which brings about such decisions. However, to the patients, their doctor, and their surrounding friends and relations the rejection at the end of the road seems especially unkind if it has been preceded, as it often has, by much kindness and care, and doesn't help the image of the hospital.—I am, etc.,

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Bickley, Kent.

BARBARA G. MORTON.

Image of Nursing

SIR,—It was surely not necessary to do a social survey to discover that the public image of nurses as "very overworked" (26 June, p. 1626) is bad for recruitment, nor that the Royal College of Nursing's emphasis on higher education must have the same effect.

It is true that nurses work very hard, but they have many compensations. Apart from the high esteem in which they are held (quite rightly) by the general public, nurses have many facilities for cultural and recreational activities, and they lead a life which is rich in companionship. They do not waste their time and energy in travelling to and from work, nor do they have to clean their rooms, do their own laundry, or cook meals. These points should be emphasized and would do much to offset the drawbacks inherent in the provision of a 24-hour nursing service.

Similarly every doctor knows that the Royal College of Nursing's policy of increasing academic standards to those of university level is deterring suitable girls from entering the nursing profession. Many who have the necessary qualities of character and humanism fear they are "not clever enough."—I am, etc.,

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Synovial Fluid in Gout

SIR,—Dr. W. P. U. Jackson and Dr. F. Harris (24 July, p. 211) have had the good fortune to examine synovial fluid from a patient suffering from hyperparathyroidism, hyperuricaemia, arthropathy, and calcification of articular cartilage. Such fluids are of particular interest for the light they may shed on the mechanism of arthropathy in these patients, who are candidates, not only for gout and "pseudogout" but also for arthritis secondary to underlying bone disease.

Their case report describes attacks of acute arthritis affecting, *inter alia*, the right hip-joint and a big toe. This would suggest that more than one mechanism was operating, for hip-joint involvement in classical gout (especially during the first five years) is exceptionally rare, while podagra has yet to be described in pseudogout. Unfortunately the crystals have not been positively identified in this case, and the suggestion that the joint fluid contained crystals of two different compounds must be very tentative.

Birefringence is, of course, exhibited by both urate and calcium pyrophosphate crystals. Differentiation between the two requires identification of the sign of birefringence, urate being strongly negative, calcium pyrophosphate weakly positive. Proof of the identity of urate crystals is by uricase digestion.

We have had the opportunity of examining synovial fluids from 22 patients with radiological calcification of joint cartilage. In general our findings have given less clear-cut answers than anticipated, and a number of specimens contained more than one type of crystal. In one patient with associated hyperparathyroidism the synovial fluid on two occasions was found to contain crystals which exhibited strong positive birefringence and had an extinction angle of 30°. Histochemical studies showed the presence of calcium. The other radical has not yet been positively identified, but we are impressed with the resemblance of these crystals to calcium oxalate.

It may well be that gout and pseudogout can co-exist in the same person. One patient in this series is regarded as suffering from classical uric-acid gout, yet on one occasion fluid from his inflamed knee-joint yielded typical calcium pyrophosphate crystals.—We are, etc.,

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REFERENCES

- ¹ *Brit. med. J.*, 1964, 2, 889.
- ² Bywaters, E. G. L., Dixon, A. St. J., and Scott, J. T., *Ann. rheum. Dis.*, 1963, 22, 171.

Hospital at Bath

SIR,—The Royal National Hospital for Rheumatic Diseases at Bath, the third oldest voluntary hospital outside London, has just reopened after almost complete rebuilding. The first hospital in the world to devote itself to the treatment of arthritis, it was bombed in 1942, but it still has many interesting records and incidentally two fine pieces of Roman mosaic in its foundations. We are now anxious to build up a small museum, and if any readers have for disposal such relics as cupping-glasses, leech tubes, bone or wooden stethoscopes, blood-letting sets, etc., I would be very interested to hear from them.—I am, etc.,

Bath, Somerset. GEORGE D. KERSLEY.

Acute Hepatitis

SIR,—Since the investigations of Allen and Sayman¹ and more recently by Mirick *et al.*² in the United States, it has become increasingly clear that the risk of post-transfusion hepatitis, particularly in recipients aged over 40, is considerable. The incidence of post-transfusion hepatitis can be significantly reduced by the judicious selection of patients for transfusion, by concurrent administration of gamma-globulin, or by the use of hepatitis-free plasma infusions. It is evident that the supplies of human gamma-globulin would not allow its free use with blood transfusion, and our need for hepatitis-free plasma for replacement therapy is thus more urgent.

In this country an estimate of the size of the problem of hepatitis cannot be made since hepatitis is not notifiable on a national basis. Before we can begin to undertake any preventive measures the first step should clearly be the notification of hepatitis and the establishment of a follow-up system for patients who have received blood transfusions.—I am, etc.,

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REFERENCES

- ¹ Allen, J. G., and Sayman, W. A., *J. Amer. med. Ass.*, 1962, 180, 1079.
- ² Mirick, G. S., Ward, R., and McCollum, R. W., *New Engl. J. Med.*, 1965, 273, 59.

Otogenic Tetanus

SIR,—The case of otogenic tetanus described by Drs. I. T. Boyle, W. C. Brown, and E. A. Richardson (10 July, p. 89) prompts us to record a further case.

The patient was a boy aged 9 who was subject to repeated attacks of bronchitis and who had suffered from an intermittent discharge from the right ear from the age of 4. This ear, which had been dry for nine months, became painful and started to discharge eight days before admission to Pembury Hospital. Three days before admission he fell into a duck pond, and on the day before admission he complained of a stiff neck and difficulty in opening his mouth. Spasms developed on the day of admission and rapidly became frequent and severe. In the past he had probably received antitetanus serum for a laceration of the wrist, but there was no record of the administration of toxoid either then or later.

On examination at Pembury Hospital the patient was obviously suffering from severe tetanus, with marked trismus and opisthotonos, and severe spasms. His temperature was 100° F. (37.8° C.) and the pulse rate was 120/min. Pus was discharging from the right ear, but there was no tenderness, swelling, or oedema over the mastoid. A bacterial swab taken at this time subsequently grew *Clostridium tetani*.

The patient was given 2 mega-units of crystalline penicillin and sedated with bromethol. In view of the short period of onset (12 hours) and the probable shortness of the incubation period (three days), he was anaesthetized and paralysed with D-tubocurarine, and a cuffed endotracheal tube was inserted. Ventilation was controlled by hand during the journey to Hammersmith Hospital and subsequently was maintained by an East-Radcliffe ventilator. Shortly after transfer a tracheostomy and right mastoidectomy were performed. 100,000 units of A.T.S. were given intravenously before the surgical intervention, and the spasms were controlled with intermittent injections of D-tubocurarine (30 mg. intramuscularly). Sedation was given at night, but not during the day. Total paralysis was maintained for 16 days, but during this time the patient managed to communicate with the nurses by squeezes of the hand. The progress of the disease was checked at intervals by withholding curare until definite spasms occurred. A right middle lobe collapse, which was present on admission, cleared rapidly with physiotherapy and there were no other complications. Weaning from the ventilator was commenced on the 17th day (sedation being maintained with promazine and quinalbarbitone) and the tracheostomy tube was removed seven days after discontinuing the curare. Ten days later he was able to start walking and the residual muscle stiffness had disappeared. Apart from complete deafness in the right ear, the patient made an uninterrupted recovery.

Immunization with tetanus toxoid was commenced before leaving hospital.

The interest of this case lies in the possibility of contamination of the ear by submersion in the duck pond. If infection entered at this time the shortness of the incubation period may be related to the shortness of the route between the middle ear and the central nervous system.

We are grateful to Dr. N. M. Jacoby, consultant paediatrician, Pembury Hospital, for details of this case.

—We are, etc.,

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Poisons Information Centre

SIR,—Earlier this year the 7505 United States Air Force Hospital at Burderop Park, near Swindon, completely closed down, so the Poisons Information Centre, to which you refer in your leading article (24 July, p. 185), is no longer operational. This centre readily and freely offered its services to British doctors, and in this context it is opportune to mention that this was just one of many examples of the excellent liaison and friendly co-operation which existed between American and British doctors in this particular area.

With the closure of American air bases and the 7505 U.S.A.F. Hospital, the Oxford Group of the Anglo-American Medical Society has, regrettably, had to be dissolved, but the Society continues to meet in the Cambridge and London area. The Anglo-American Medical Society was founded in 1961 to "meet the great need that obviously existed for an organization through which British and American doctors could obtain a clearer knowledge and better understanding of each other." Contact was made through regular scientific programmes and social meetings, and I know from discussions I have had with my colleagues, and from letters I receive from American doctors who have now returned to the United States, that the aims and ideals of the Anglo-American Society were attained to the mutual and, I believe, lasting benefit of both communities.—I am, etc.,

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Anglo-American Medical Society
(Oxford Group).

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Thoracic Actinomycosis

SIR,—I wish to report a further interesting case of actinomycotic infection, having read the letter of Dr. B. Bissu (24 July, p. 231) attracting attention to this disease.

A labourer aged 20 years was admitted to Whipps Cross Hospital on 22 April 1965 with a history of an injury to his right loin sustained eight weeks previously in a fight. He had had pain in his right chest on breathing for three weeks before admission and had lost about 3 st. (19.1 kg.) in weight since his injury; he also complained of anorexia and had been sweating at night but had no cough. On examination he was febrile (101° F. (38.3° C.)) and looked ill, showed no obvious dental caries, had a dorsal scoliosis to the left, and there was a tender