being helped by quadriceps exercises and radiant heat. Subsequent convalescence, though slow, was uneventful. Negative investigations included stool examinations, culture of urine and 24-hour specimen for the acid-fast bacillus, x rays of the affected joints and also of the chest. Leucocyte counts in the acute stage varied between six and nine thousand cells per c.mm. (P.: 70%; L.: 25%; M.: 3%; E.: 2%). Blood culture was sterile.

The patient illustrates the salient features of the disease, including the liability to sudden serous joint effusions and the subacute but self-limited course. The duration of nearly four months coincides pretty well with the cases written up by Jackson and by Wrigley (*ibid.*, p. 199). He also appears to have been helped by sulphathiazole as were their cases.

It is one of the many annoying features about medicine in India that many special investigations are not available, including the gonococcal complement fixation test, but there was no clinical doubt that this was not a case of gonococcal arthritis but of the rarer Reiter's syndrome.—I am, etc.,

K. W. G. HEATHFIELD,
Capt., R.A.M.C.

Secunderabad, India.

SIR,—The article by Flight-Lieut. W. P. U. Jackson (Aug. 10, 1946, p. 197) and comments on same by Drs. R. N. Herson and Frank Marsh (Aug. 24, p. 275) and by Dr. Joseph Denfield (Oct. 12, p. 555) have moved us to write this letter. In 1943 in our article on virus infection of genitalia (*Rev. chil. Hig.*, 5, 253) we referred to the existence of a positive Frei test, eye fundus oedema, and of deep iliac lymph node inflammation in typical and *frustes* forms of so-called Reiter's disease and attributed the syndrome complex to the action of lymphogranuloma venereum virus. In some cases the disease was accompanied by an abacterial urethritis, but in most the discharge contained gonococci. L.V.-gonorrhea association is not infrequent, as pointed out by us in 1943 (*Brit. J. vener. Dis.*, 19, 37).

A similar condition to that observed in males was described by us in women in 1944 (*Obstet. Gynec. Lat.-amer.*, 2, 9). The existence of a positive Frei test, typical L.V. eye fundus findings, and other evidence of L.V. infection were also found by us in so-called Behcet's syndrome and also published in aforementioned articles. If colleagues have interest in reading articles published in Spanish, reprints will be gladly forwarded on request.—I am, etc.,

Santiago, Chile.

W. E. COUTTS.

Cerebral Malaria in Great Britain

SIR,—Both in Britain and in tropical climates malarial infection is frequently associated with intercurrent infections. Parasites may be found in blood films and the prognosis altered accordingly. Acute bronchitis, pneumonia, and typhus fever (10% of my 493 cases), and cerebrospinal fever were perhaps the most noteworthy associated infections in my experience in the Far East (1942-6). I had three cases of meningococcal meningitis associated with malaria (positive blood films). Treatment was directed to the meningitis first, and the malarial infection was concurrently treated with quinine and mepacrine.

It therefore caused me some surprise to read that Dr. Walter Broadbent (Jan. 4, p. 32) was so ready to diagnose cerebral malaria in the case of a man with fever and meningism who had recently returned from West Africa, even assuming that he found malarial parasites in blood films. In my experience meningism was not always found in cerebral malaria, and in such a case as he describes I could not have rested content without first examining the cerebrospinal fluid to exclude meningitis. Although in this particular case his diagnosis was correct and was to be commended, I submit that the assumption that every case of fever associated with meningism and positive blood film is one of malaria only may lead to disaster, because meningitis, which may sometimes be present in addition, may escape recognition and treatment. Likewise pneumonia may often escape recognition where malaria cases are diagnosed by blood films. Indeed, it was my custom in my division of the military hospital in which I was stationed to be on the look-out for chest signs among the many malarial cases under treatment. It was not an infrequent occurrence to recognize pneumonic signs in cases previously missed by medical officers.

I think these points should be mentioned in view of the fact that malarial relapses may at any time arise among certain persons returned from overseas, and may come under the care of practitioners inexperienced in (and sometimes ignorant of) the disease and its associations. Relapses of malaria are common in the cold weather, but fresh cases are only likely to arise in spells of hot weather. While the disease should be suspected in any person with fever recently returned from an endemic area, and cases in doubt should be treated, it is of equal importance to see that superadded infections such as pneumonia and meningitis should not remain untreated in the early stage, even in those cases in which parasites are found on examination of the blood films.—I am, etc.,

Windsor, Berks.

PHILIP H. WILLCOX.

Early Diagnosis of Tuberculosis in Adolescents

SIR,—In view of the great increase of tuberculosis among the 15-25-years group of the population and the impracticability of mass radiography as a general routine, would it not be a good thing if all "school leavers" were tested by the tuberculin patch or inunction method? "Negative reactors" could then be followed up by repeat tests at frequent intervals of, say, about three months.

This type of test would be simple to apply and would be less terrifying to the child (or parent) than "the needle." It would also save the time of parents and children who might have to attend some clinic—perhaps at a distance from both home and school—for mass radiography. It would be a simple test, quickly applied and easily checked, and should help to keep under supervision all "negative reactors" when they enter industry or other spheres.

If the result of the test were entered on the school medical record card it would (or should) reach the doctor on whose panel list the young person is entered. If there is a medical officer—as there is in Aberdeen—to supervise the health of the students, it could be forwarded to the university medical officer or the training centre medical officer and so complete the follow-up during those years of great susceptibility.—I am, etc.,

Aberdeen.

WINNIEFRED M. GRAY.

Chemoprophylaxis of Rheumatic Disease

SIR,—It has been, rightly or wrongly, attributed to the rarity of nasopharyngitis that acute and chronic rheumatic polyarthritis and rheumatic heart disease, common to both tropical and temperate zones,^{1,2} are unknown among nomadic Lapps.³ For fifteen years it has been noted that a nasopharyngitis (phase 1) or indeed a mild gastro-enteritis precedes the efflorescence of rheumatic fever or idiopathic rheumatoid arthritis (phase 3) by a "latent" phase 2 of 5-40 days.⁴ The chemoprophylaxis of phase 1 is based on the assumption that haemolytic streptococci (group A) are the essential organisms in their bacterial flora. In my experience this is not necessarily so.

The action of penicillin or sulphonamides is not anti-rheumatic.⁵ The latter aggravate a smouldering rheumatic infection and must be used cautiously. Even in the latent phase 2 frequent electrocardiograms disclose myocardial mischief. Further Swift,⁷ who has emphasized that in children a chronic rheumatic carditis may show persistent activity for months and even years, notes that subclinical rheumatic relapses occur with a frequency hitherto unsuspected, as disclosed by the careful records of body temperature, sleeping pulse (over 80 abnormal for children, adult normal 60-65),¹⁴ and ancillary laboratory tests. Because abnormalities may be transient, electrocardiograms are needed daily or bi-weekly. While other abnormal causes must be excluded with positive tests, both the E.S.R. and leucocyte count (examined prior to noon because of diurnal tides,⁵ abnormal—9,000 or over)¹⁵ may be normal in the presence of active infection; in such cases the formol-gel reaction is abnormal.⁷ Usually there is a close correspondence between E.S.R., leucocyte count, and body temperature (10 minutes orally).

An invaluable common sign, hitherto undescribed, of rheumatic infection is a sudden onset of mild to moderate tenderness and tenseness of finger pads, the overlying skin being dark red in colour, transient in 48 hours but aggravated by trauma (watch-

winding or writing) and indistinguishable from Osler's digital nodes. A similar complaint is seen in rheumatoid arthritis and in epidemic polyarthritis.⁸ Chronic rheumatic carditis may present a transient bacteraemia, splenomegaly, purpura (petechia, subungual splinter, and subconjunctival)⁹ and be confused with septic endocarditis, in 10% of which the blood culture is persistently negative.¹⁵ Both may coexist.^{10, 15} The absolute diagnostic criteria of the latter are organic heart disease plus a persistently positive blood culture (non-specific) or infective emboli. Penicillin therapy would be diagnostic if curative.

Chronic persistent rheumatic carditis in an adult has hitherto not been reported, but I have witnessed such a case resulting from the too early mobilization of an acute myocarditis prior to the disappearance of the abnormalities of the E.C.G. For the chronic as for the acute carditis complete bed rest is essential.¹⁰ Comparison of the recent cardiac research in idiopathic rheumatoid arthritis with the usual sad course and prognosis of chronic rheumatic carditis demonstrates its validity. Of the 60-70% of the bedridden or inactive patients presenting inflammatory heart disease post mortem less than 25% was detected clinically during their illness.^{11, 12} The management of rheumatic fever is still a test of the skill of a physician.—I am, etc.,

Dublin.

A. D. McDWYER.

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Nocturnal Drip Feeding

SIR,—In pulmonary tuberculosis the patient who needs food most on account of loss of weight, fever, and malnutrition is usually he who can eat least owing to loss of appetite. Rest and other measures to decrease "toxaemia" usually check the patient's downward course by restoring appetite sufficiently to maintain a credit on the nitrogenous and calorific balance sheets, but this is not always the case. Bullying or very strong persuasion to "stuff" results in dyspepsia and disgust for food.

Although calories are being spent night and day it is usual and convenient to take in a 24-hour supply of food during the daytime, and this is of course possible except when the appetite is poor. It would seem rational therefore to use the night as well as the day for feeding, and this would be most easily done by a nocturnal drip feed (N.D.F.) of hydrolysed protein and glucose. N.D.F. offers the following advantages: (1) Almost empty stomach all night and so unlikely to encourage nausea and feeling of fullness; (2) would not mean waking for meals in night; (3) would give "round the clock" nutrition, so that patient would absorb almost two days' food in one day; (4) would conquer the difficulty that anorexia puts in the way of high-calorie and high-protein diet; (5) would not interfere with appetite for next day's food.

Patients will co-operate if it is explained that they are getting the equivalent of two beef-steaks while they sleep. Hydrolysed protein is easy to obtain. A metal reservoir, a Ryle's tube, and glass drip connexion are the simple requirements. No experimental proof of effect is here offered. Those who care to try the suggested method will find that the "proof of the pudding is in the eating."—I am, etc.,

London, N.21.

F. A. NASH.

Physics in Medicine

SIR,—I have read the article on the implication of physics in medicine by my learned teacher Prof. F. L. Hopwood and his distinguished colleagues (Feb. 15, p. 261) with considerable interest. As a first-year student I often had heart-burnings as to how much of the physics I was being taught had any direct bearing on my future status as a medical practitioner. I came to the conclusion that apart from its being a useful exercise

in mathematical deduction and scientific observation it could be usefully pruned of many of its components. I feel that the mechanics section and a good deal of that devoted to heat could be considerably reduced in amount. To compensate for these reductions the time saved could be given up to a study of the elements of atomic physics and of the groundwork of physics as it is reflected in subsequent radiodiagnosis and radio-therapeutics. In this connexion instruction for the student in the handling of the x-ray apparatus could be of some service. A practitioner with a knowledge of the operation of, e.g., a portable unit could be a useful member of any medical fraternity.

It would be useful too if special sessions were arranged in the clinical years for study of film interpretation. How few of us, I feel sure, are competent to read normal, let alone abnormal, radiographs in a correct manner! How often do the reports of fellow radiodiagnosticians conflict the one with the other, especially in the elucidation of thoracic and cranial lesions with their frequent intriguing shadows!—I am, etc.,

Devonport.

J. B. GURNEY SMITH.

Endocrines in Gynaecology

SIR,—May I add, somewhat belatedly, to the comments you have already published on Mr. Aleck Bourne's paper (Jan. 18, p. 79)? As Dr. G. I. M. Swyer (Feb. 1, p. 198) and Dr. S. L. Simpson (Feb. 15, p. 270) have already said, there is nothing new in the concept of varying tissue sensitivity to hormones, but there was good reason for Mr. Bourne to stress it, for it is often neglected in practice. One may add to the examples already given and point out that sensitivity may vary from individual to individual, which makes the expression of exact dosage difficult, from one side of an individual to another (as in unilateral gynaecomastia, fibroadenosis, and acromegaly), from one part of an organ to another (as in nodular goitre and again in fibroadenosis of the breast), as well as from one whole organ to another, as in the example quoted by Mr. Bourne and in a patient once under my care who suffered from both atrophic rhinitis and fibroadenosis of the breasts. In this unfortunate patient I found that the fibroadenosis responded well to androgens, and that the atrophic rhinitis was rapidly relieved by oestrogens, which, however, made the fibroadenosis worse. The problem was solved by local administration of testosterone ointment to the breasts and of oestradiol in oil to the nose.

There are, however, two statements in Mr. Bourne's paper with which I cannot agree. He states that "primary amenorrhoea can never be cured." It is true that cures are rare, but I have seen two recoveries among many failures. The more recent was a young Jewess of 17 with an infantile figure, no visible or palpable breast tissue, a minute uterus, and only a trace of pubic hair. Treatment for some months with a high dosage of oestrogen caused her breasts to develop, pubic hair to grow, and her uterus to increase in size. Soon after, uterine bleeding occurred. Treatment was changed from continuous to cyclical, and after six regular periods oestrogen (withdrawal bleedings had occurred) was stopped. The periods remained almost regular. Two years later (three years from the beginning of treatment) she married and within four months was pregnant. Her baby is due next April. It is possible that I am committing the *post hoc propter hoc* fallacy, but I don't think so.

Mr. Bourne is also too dogmatic in his remarks about the use of androgens in metropathia. Though it is certainly true that a high proportion of patients must ultimately come to x rays or hysterectomy, many severe cases can be kept in good health by an occasional course of methyl testosterone, which is comparatively cheap and which does not produce virilism in the dosage required. A few milder cases make a complete and apparently permanent recovery. Hysterectomy is far too often performed in cases of menorrhagia. No harm is done and much unhappiness is avoided by a preliminary trial of medical treatment. I feel sure that Mr. Bourne, whose work with Lord Moran on the use of thyroid extract in the menorrhagia of puberty must have saved many young girls from hysterectomy, would be well advised to give a further and perhaps more energetic trial to the use of methyl testosterone in the menorrhagia of riper years.—I am, etc.,

London, W.1.

RAYMOND GREENE.