Alternative arrangements will have to be made for the radiological examination of staff who have in the past been examined by the mass radiography service.—I am, etc.,

T. FRANCIS JARMAN.
Medical Director,
Mass Radiography Service,
Welsh Hospital Board.

Cardiff.

REFERENCE

- ¹ Nash, F. A., *Annual Report of the South-West London Mass X-ray Service*, 1968.

Glue Ear

SIR,—Your leading article (6 December, p. 578) describes the diagnosis and treatment of this condition. It does not stress, as it should, that when diagnosed many children have already had symptoms for months or years. The statement that "it occurs principally in children between the ages of 5 and 8" should be altered to read "it is diagnosed principally between the ages of 5 and 8." The reason for this is quite simple, as it is not until screening of hearing at school is done that attention is first drawn to an already long-standing condition. The gloomy prognosis you give is much improved by earlier diagnosis, in which the acoustic impedance audiometer is essential, and by more energetic treatment, as our figures show.¹

To give the idea—as you do—that treatment is of little value, and that the condition will in any case burn itself out at puberty, is a most dangerous doctrine. Glue ear when untreated is the main source of "chronic" otitis media in the adult; it is responsible for many cases of cholesteatoma, for much otorrhoea, for a great deal of permanent hearing loss, and ultimately for some loss of life. Such "chronic" infection is "chronic" from the outset—there is often no acute phase except the ultimate acute-on-chronic stage which can be so dangerous.—I am, etc.,

T. J. WILMOT.

Omagh, Co. Tyrone.

REFERENCE

- ¹ Currid, K. M., *Proceedings of Irish Otolaryngological Society*, 1968, 9, 15.

Whooping Cough Immunization

SIR,—Dr. J. Cameron is incorrect in stating in his letter (10 January, p. 109) that the Public Health Laboratory Service whooping cough report assumes that prior to 1968 pertussis vaccines used in the U.K. were of identical potency. The report, which was concerned not with laboratory estimates of potency but with assessing the efficacy of the vaccines in use in protecting children against whooping cough, made no such assumption. Indeed, it is clearly stated that there may well have been differences in the efficacy of vaccines from different sources.

Dr. Cameron is also incorrect in concluding that the method of assessment used in the survey was biased by "its dependence on confirmed source cases." The assessment was based on the incidence of whooping cough in fully vaccinated children exposed to infection in households in which the presence of *Bordetella pertussis* was established by laboratory examination. The evidence of high attack rates in vaccinated children in the households leaves no reasonable doubt that much of the vaccine which these children had received gave poor protection. This was supported by the relatively small difference

between the attack rates of vaccinated and unvaccinated contacts.

It is true that the findings of the report do not necessarily reflect the relative frequency with which vaccines from different sources were used in the U.K. during the relevant period. No attempt was made to draw any such conclusion, for, as Dr. Cameron says, children given particularly effective vaccines would seldom develop whooping cough and appear as source patients. However, children given such vaccines would not be prevented from appearing as contacts unless there was a tendency for the same make of vaccine to be given invariably to all children in the same household. This in fact is not so, as shown by the records of the households included in the survey. A more likely explanation of the small number of contacts in the survey found to have received Wellcome vaccine is therefore that the amount of Wellcome vaccine used in the areas surveyed during the years in question was relatively small.

We have no means of assessing usage for the entire period 1956-67, but we can estimate it for the four years 1964-67. An inquiry based on a random sample of all local health authorities in the U.K. and on all the survey areas shows that the amount of Wellcome vaccine bought by local authorities during those years was only about a quarter of the total bought from the two principal sources of supply. Turning to the survey, the contacts who could have been given these vaccines were likely to be less than four years of age at the time of the survey, and in this age group about one-fifth of the contacts given vaccine from one or other of the two principal suppliers had received Wellcome vaccine. These figures suggest that the proportion of contacts who had been given Wellcome vaccine broadly reflects the amount of Wellcome vaccine used in the U.K. during the period.

Dr. Cameron questions the advisability of combining the data on vaccines from different sources in some of the Tables. But possible differences between vaccines were pointed out—we had not sufficient data to support or refute them. On the other hand, the small number of contacts given Wellcome vaccine could not appreciably affect the main conclusion that the general results of vaccination were disappointing.

Unfortunately in quoting isolation rates of *B. pertussis* from different areas Dr. Cameron has anticipated a future report: the preliminary report was, as stated above, concerned with protection and therefore only with households in which *B. pertussis* was isolated. In suggesting that the isolation rates in different areas could indicate the relative efficacy of vaccines Dr. Cameron fails to take into account other variables between areas which make conclusions drawn from any such comparisons invalid. It happens that in the area with the lowest isolation rate that he quotes we know the relative proportions of the vaccines bought by the local authority from the two principal suppliers in the years 1960-67. Only about 25% was bought from Wellcome laboratories. Thus the low isolation rate in this area cannot be ascribed to extensive use of Wellcome vaccine.

Lastly, Dr. Cameron's final point about the unitage of vaccines can scarcely be as-

serted on the basis of the evidence of the present survey.—I am etc.,

E. H. GILLESPIE,

Chairman,
Public Health Laboratory Service
Whooping-Cough Committee
and Working Party.

Public Health Laboratory,
Northern General Hospital,
Sheffield.

Value of Osteopathy

SIR,—Dr. P. Jacobs (20 December, p. 744) has pointed out an unintentional ambiguity in one of my comments (6 December, p. 610). I did not intend to question the correctness of this differentiation between osteoporosis and osteomalacia, albeit a radiological distinction and one which many clinicians would carry considerably further. I meant to infer that, having specifically distinguished between osteoporosis and osteomalacia by these criteria, patients with osteoporosis were being recommended heavy doses of vitamin D only suitable and safe for patients with osteomalacia.

I shall remain unconvinced of Dr. A. Stoddard's (20 December, p. 744) claim to be able to detect $\frac{1}{4}$ in. (0.6 cm.) shortening in one leg and one degree of loss of mobility in the thoracic spine without observer-error studies. We have recently performed some studies of observer error in measuring leg-length or pelvic tilt by palpating the iliac crests in the erect position. Four experienced observers were asked to comment if the legs differed in length when raises of 0, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, and 1 inch (6.6, 1.2, 1.8, and 2.5 cm.) inserted randomly under one or other foot of a normal subject, the legs being screened from the observer. With raises of $\frac{1}{4}$ in. (1.2 cm.) or less the observers were as often incorrect as correct as to which side, if either, was raised. With raises of $\frac{3}{4}$ and 1 inch (1.8 and 2.5 cm.) all observations were correct.

Mr. D. R. Sweetman's (3 January, p. 51) persuasive argument concerning the level of a hanging picture is not strictly analogous. In this situation one is relying solely on visual impressions from a greater distance, comparing the horizontal upper and lower edges with other reference points, such as the picture rail or wallpaper pattern.—I am, etc.,

D. A. H. YATES.

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St. Thomas's Hospital,
London S.E.1.

Meningitis due to *Pasteurella multocida*

SIR,—Meningitis due to *Pasteurella multocida* infection appears to be extremely rare in Great Britain,¹ and such infection is often fatal. We would like to report an adult patient who survived this infection.

The patient, aged 56, had a tumour in the pituitary region of which a biopsy in February 1967 showed many of the histological features of an invasive pituitary adenoma. The patient received a course of radiotherapy to the pituitary region. In June 1969 he presented with a history of unilateral earache for one day, and symptoms suggestive of meningitis. The cerebrospinal fluid (C.S.F.) was turbid, and contained 50,000 leucocytes per cu.mm., practically all neutrophils. Protein content was 500 mg. per 100 ml., and numerous Gram-negative coccobacilli were in the centrifuged deposit, some being intracellular. An organism was subsequently grown from the C.S.F. in pure culture and, though originally

thought to be *Haemophilus influenzae*, or possibly a coliform, it grew well on nutrient agar in the absence of X and V factors, and did not grow on McConkey's agar. It was finally proved to be *Pasteurella multocida*, a mouse dying 24 hours after inoculation with a culture of the organism. This organism was sensitive in vitro to penicillin, chloramphenicol, tetracycline, erythromycin, and cephaloridine. The white blood cell count was only 9,000/cu.mm. on admission, 85% of these cells being neutrophils. Discharge from the right ear produced a growth of *Staphylococcus aureus*, but no other organism was identified.

The patient was treated initially with full doses of penicillin, chloramphenicol, and sulphadimidine. Chloramphenicol was discontinued after one week, and the dose of sulphadimidine was reduced. After a further week the penicillin was replaced by a short oral course of cloxacillin, since the staphylococcus grown from the middle ear was penicillin-resistant. A second C.S.F. specimen obtained 10 days after the first was sterile, but still contained 22 leucocytes (mainly lymphocytes) per cu. mm. Satisfactory progress was maintained, and the patient was discharged home after one month in hospital. No contact with dogs or cats was admitted on direct questioning, and no symptoms of bronchitis had been noticed.

Pasteurella multocida is not uncommonly present in infected wounds, particularly in those caused by dog or cat bites, and is also found in the respiratory tree. It is usually not difficult to culture, although confusion may well arise between *Pasteurella multocida* and *Haemophilus influenzae* and possibly even with bacteria of the *Neisseria* group. This is especially true when a direct smear taken from the C.S.F. deposit is examined as an emergency procedure, as in this case. *P. multocida* is usually sensitive in vitro and in vivo to penicillin, and this would seem to be the drug of choice. However, as *Haemophilus influenzae* infection was considered likely, three different antibiotics were given to the patient reported here, and it is probably wise to give more than one antibiotic to patients with *P. multocida* meningitis in view of the poor prognosis.

No history of an animal bite was obtained, nor was there any evidence of bronchitis, both of which might have afforded a possible portal of entry for the organism. Since the patient had had a biopsy of the pituitary in the past it is possible that the organism entered through the nose, and even though the organism was not grown from the aural discharge this does not rule out the possibility of an infected middle ear being the portal of entry to the meninges.—We are, etc.,

J. A. EASTON.

J. LISTER.

C. PRAKASH.

Wexham Park Hospital,
Slough, Bucks.

REFERENCE

- Mair, N. S., "Some Diseases of Animals Communicable to Man in Britain": *Proceedings of Symposium Organized by the British Veterinary Association and the British Small Animal Veterinary Association, London, June 1956*, 1968. Oxford and New York, Pergamon Press.

Obese Non-diabetic Patients

SIR,—We would like to raise several points regarding the paper by Drs. A. Hart and H. Cohen (3 January, p. 22) on their trial of phenformin for obese non-diabetic patients.

For instance, in their discussion they state that they took the precaution of giving phenformin only in therapeutic dosage, for "in this way there was less danger that weight reduction could have been due to anorexia produced by the drug or interference with intestinal absorption." By "therapeutic dosage" they presumably mean the type of dosage usually required to lower the blood sugar level. If by "therapeutic dosage" they mean to reduce body weight, then the average amount required would be considerably greater in obese diabetics. By the purposeful avoidance of such doses they seem to have predetermined the negative results of their trial with regard to weight loss in non-diabetic obese subjects, for there is increasing evidence to show that the weight loss induced by biguanides is effected both by anorexia and malabsorption, in both diabetics and non-diabetics.^{1,3}

Further on in their discussion they also say, "Our experience leads to the conclusion that there exists in obese patients with diabetes a metabolic disturbance which is favourably modified by phenformin to effect weight reduction. There are obese non-diabetic subjects who do not have this metabolic disorder and therefore do not lose weight as a result of phenformin administration." The first part of this statement is so vague as to render the second part meaningless.—We are, etc.,

J. M. STOWERS.

P. D. BEWSHER.

Diabetic Outpatient Department,
Royal Infirmary,
Aberdeen.

REFERENCES

- Stowers, J. M., and Bewsher, P. D., *Postgraduate Medical Journal*, 1969, May Suppl., p. 13.
- Pedersen, J., and Olesen, E. S., *Acta Endocrinologica (Copenhagen)*, 1968, 57, 683.
- Czyzyk, A., Tawicki, J., Sadowski, J., Ponikowska, I., and Szczepanik, Z., *Diabetes*, 1968, 17, 492.

Allergy to Iprindole (Prondol) with
Hepatotoxicity

SIR,—Side-effects with iprindole are uncommon, and so far as I know no cases of hepatotoxicity have been published.

The patient was a 42-year-old woman who was pregnant for the fifth time, with three children surviving. She had had no miscarriages. This pregnancy was uneventful, except for a single episode of pain in the left chest, and tenderness over the left kidney at 13 weeks. The only treatment she received for this was a few tablets of paracetamol. The pain cleared completely after four days. The only other drugs she received during pregnancy were iron (as Ferromyn-S) one three times a day, and folic acid 5 mg. daily.

At her post-natal examination on 30 April she mentioned that she was feeling "flat" and depressed, which I explained to her in terms of post-puerperal depression, and prescribed iprindole 15 mg. three times a day. I next saw her two weeks later, when she told me she had stopped taking the tablets. When questioned further it appeared that she had had a generalized rash after taking only five tablets, with giant urticaria, dermatographia, and weal formation. This rash and irritation stopped after about two days. After a further five days she started taking the tablets again, but after approximately five days she again stopped taking them because her rash recurred. She was vomiting bile and felt ill. Her urine was dark and gave a positive reaction to presence of bile (Ictotest). At no time was she clinically jaundiced.

Laboratory investigations on the same day

showed a raised E.S.R. 40 mm./hr.; W.B.C. 4,600/cu.mm. (normal differential); total protein 7.4 g./l.; electrophoresis albumin within normal limits, slight increase in alpha₂ globulin (otherwise normal distribution); serum bilirubin 1.3 mg./100 ml.; direct van den Bergh positive, alkaline phosphatase 25 K-A/units; thymol turbidity 1 unit; G-P transaminase 120 units. The pathologist's comment on the liver function tests was "consistent with hepatotoxicity." Two weeks later the E.S.R. had fallen to 16mm. in one hour and liver function tests were normal except for a slightly elevated alkaline phosphatase at 15 units. Urine bile test was negat.ve.

Iprindole is a fairly new drug, for which is claimed a lower incidence of side-effects when compared with other antidepressants. I feel this patient showed an allergic reaction to iprindole, as the symptoms recurred after the patient's own resumption of the drug after initial withdrawal. She also had a mild degree of hepatic involvement from which she made a complete recovery.

I should like to thank Dr. J. Lister, consultant physician to the Windsor Group, and Dr. T. V. A. Harry, of the medical department of John Wyeth and Brother Ltd., for their help with the presentation of this case.

—I am, etc.,

Bracknell, Berks.

P. J. W. YOUNG.

Organic or Psychogenic Stupor

SIR,—The differentiation of organic from psychogenic stupors receives but scant attention in the medical literature. A patient was recently admitted in stupor who had a past history of both cerebrovascular disease and depression. The definitive diagnosis was made only after the use of intravenous sodium amylobarbitone.

The patient, a 44-year-old woman, was hypertensive and had suffered a left hemiplegia eight weeks before her first admission to a psychiatric hospital with a depressive illness. The depression responded well to amitriptyline. Shortly after admission she had a sweating attack, and subsequent E.C.G.s. suggested a small myocardial infarction. In view of this and persisting hypertension she was transferred to a general hospital for review of her cardiovascular state.

Shortly after her transfer she became suddenly withdrawn and unresponsive and was readmitted to a psychiatric hospital. She was now mute, almost akinetic, but followed ward activities with her eyes and on occasions would respond to some verbal commands. She was incontinent and had to be fed. A diagnosis of stupor of either depressive or organic origin was made.

Ward observations were unhelpful, so a trial of intravenous sodium amylobarbitone was performed. Over five minutes 250 mg. of a 5% solution of sodium amylobarbitone was injected slowly. Following this the patient became more talkative, the content being entirely depressive. She also became more mobile, walking about the ward and eating her meals unaided.

Thus it became obvious that the stupor was of a depressive nature, and a course of electroconvulsive therapy was given with beneficial effect.—I am, etc.,

W. A. SAUNDERS.

Barrow Hospital,
near Bristol.