when he is admitted to hospital and therefore is no longer able to contact the general practitioner who has probably for many years been his guide, philosopher and friend. I am, etc.,

I. P. ROWLANDS

Bryn-y-Neuadd Hospital
Llanfairfechan,
Caernarfonshire

Pyomyositis in London

SIR,—Dr. D. W. Rogers (29 September, p. 679) rightly describes pyomyositis as the formation of abscesses in one or more skeletal muscles but goes on to describe an abscess "lying in an intermuscular position." The intramuscular location of the abscesses of pyomyositis has been well described.¹⁻⁴ Anand¹ noted that an intermuscular abscess was usually associated with nematode infection, particularly *Dracunculus medinensis*. This is in accord with my own experience in the Nigerian savannah.

The muscles of the buttock and upper thigh are a common site for the abscesses of pyomyositis, which may be single. However, they are also the usual site for a type of abscess which occurs both in the tropics and the temperature zones—that is, one following an infected intramuscular injection. This may contain faecal organisms but could, like 46% of pyomyositis abscesses, contain the same phage type of staphylococcus as is carried on the patient's own skin.⁵

Occasional cases of pyomyositis may indeed be occurring unrecognized in non-tropical countries, but I would suggest that if only those abscesses with the classical features of being multiple and intramuscular are labelled pyomyositis, then the true incidence of the disease contracted outside the tropics would still closely approach zero.—I am, etc.,

P. E. T. ISAACS

Department of Gastroenterology,
Manchester Royal Infirmary,
Manchester

¹ Anand, S. V., and Evans, K. T., *British Journal of Surgery*, 1964, **51**, 917.

² Horn, C. V., and Master, S., *East African Medical Journal*, 1968, **45**, 463.

³ Ransford, O. N., *East African Medical Journal*, 1966, **23**, 278.

⁴ Levin, M. J., Gardiner, P., and Waldvogel, F. A., *New England Journal of Medicine*, 1971, **284**, 196.

⁵ Foster, W. D., *Journal of Hygiene*, 1965, **63**, 517.

Epidemiology of Hypospadias

SIR,—Dr. C. J. Roberts and Mr. S. Lloyd (31 March, p. 768), studying 93,000 births in South Wales in 1964-6, have reported a seasonal cycle for the frequency of hypospadias, an excess of cases being observed in babies conceived in winter and born in the second half of the year. A seasonal cycle was previously reported by Wehrung and Hay,¹ based on 5,145 cases of hypospadias in the United States in 1962-5. Their cases were more common among spring-time births, but only in the western seaboard area of the U.S.A. and only in 1962-3, not in 1964-5. On the other hand, Professor H. Campbell and others (7 July, p. 52) were unable to demonstrate any seasonal variation in hypospadias in the Registrar General's data for the whole of England and Wales for 1967-71, nor could Record and Armstrong (28 July, p. 233) in Birmingham births in 1950-72.

Two earlier studies^{2,3} also failed to show seasonal variation.

We have studied the monthly incidence of this malformation in 59,261 births in the record-linked Jerusalem Perinatal Study^{4,5} (see table 4). There was a high reported frequency with a marked cyclic variation, with two peaks and troughs per year. The maxima were among spring and autumn births and the minima in winter and summer, a pattern very similar to that of Down's syndrome in our population. An artefact due to differential under-reporting is most likely to be responsible; all other minor malformations show a single cycle with a trough in May. Furthermore, under-reporting should be most prevalent in autumn and spring at the times of the Jewish New Year and Passover holidays.

Hypospadias by Month of Birth, West Jerusalem, April 1964-March 1973

Month of Birth	No. of Cases of Hypospadias	Rate per Thousand Male and Female Births
Jan.	14	2.8
Feb.	12	2.9
Mar.	17	3.4
Apr.	22	4.8
May	18	3.6
June	10	2.0
July	8	1.5
Aug.	23	4.3
Sep.	15	3.1
Oct.	16	3.2
Nov.	9	1.9
Dec.	13	2.6
Total	178	3.0

P < 0.025 (Fourier analysis).

This variety of seasonal patterns for hypospadias in different studies seems inconsistent with a direct aetiological effect of hours of daylight, temperature, or climate as postulated by Dr. Roberts and Mr. Lloyd. A more promising direction of research is likely to be a search for specific infectious agents or the use of hormones in early pregnancy.—We are, etc.,

SUSAN HARLAP
A. MICHAEL DAVIS

Department of Medical Ecology,
Hebrew University-Hadassah Medical School,
Jerusalem

¹ Wehrung, D. A., and Hay, S., *British Journal of Preventive and Social Medicine*, 1970, **24**, 24.

² Sorensen, H. R., *Hypospadias: With Special Reference to Aetiology*. Copenhagen, Munksgaard, 1953.

³ Slater, B. C. S., Watson, G. I., and McDonald, J. C., *British Journal of Preventive and Social Medicine*, 1964, **18**, 1.

⁴ Davies, A. M., Prywes, R., Tzur, B., Weiskopf, P., and Stark, U. V., *Israel Journal of Medical Science*, 1969, **5**, 1095.

⁵ Harlap, S., et al., *Israel Journal of Medical Science*, 1971, **7**, 1520.

Laterality of Fractures

SIR,—Drs. T. G. Williams and B. P. Heather (6 October, p. 52) suggest that injury is more common to the non-dominant forearm.

In a paper on "Absence from Work after Fractures of the Wrist and Hand"¹ my colleagues and I noted 93 injuries to the dominant wrist and hand compared with 57 on the non-dominant side. The differences were most noticeable for those involved in heavy manual or sedentary work, there being no difference in those employed in light manual work (see table). The fractures considered were those of the metacarpals, scaphoid, and lower end of the radius and ulna.

I would not suggest that injuries are necessarily more common in the dominant

Employment	Side Injured	No.
Heavy manual	Dominant	41
	Non-dominant	24
Light manual	Dominant	25
	Non-dominant	26
Sedentary	Dominant	27
	Non-dominant	7

Dominant 93 Non-Dominant 57

hand but that the issue is not proved.—I am, etc.,

C. J. GOODWILL

Department of Physical Medicine and Rheumatology,
King's College Hospital,
London S.E.5

¹ Goodwill, C. J., Bridges, P. K., and Gardner, D. C., *Annals of Physical Medicine*, 1969, **10**, 180.

SIR,—Drs. T. G. Williams and B. P. Heather (6 October, p. 52), reporting that their patients tended to injure mainly the non-dominant forearm, wondered if this tendency had been noted previously. I would draw their attention to an article I published in 1969¹ on Smith's fractures in which I recorded that only 12 out of 44 patients had injured their dominant wrist.—I am, etc.,

J. E. WOODYARD

Staffordshire General Infirmary,
Stafford

¹ Woodyard, J. E., *Journal of Bone and Joint Surgery*, 1969, **51B**, 324.

Propellant a Factor in Asthma Deaths?

SIR,—Dr. V. E. Archer (29 September, p. 696) suggests that aerosol propellants may be a factor in the causation of death in asthmatic patients. There is no doubt that fluorocarbon or haloalkaline compounds in high concentration are cardiotoxic and have been responsible for "sniffing" deaths, but this is an entirely different situation from the asthmatic patient using a pressurized bronchodilator aerosol. In a review of the pertinent published studies,¹ it concluded that "though fluorocarbon propellants may be hazardous if they are deliberately abused, the weight of the evidence attests to both the safety and efficacy of pressurized bronchodilator aerosols when properly used to relieve asthma."

Dr. Archer gives the impression of having examined the relevant literature, yet he fails to mention a large body of published reports which fail to sustain his views and has selected from the references listed in his letter only those excerpts which support his thesis. For example, he refers to the study by Taylor and Harris² in mice as evidence that anoxia enhances the cardiotoxicity of the haloalkanes. It has been amply demonstrated that in that study it was the anoxia alone which was cardiotoxic.^{3,6} Other workers found no evidence that anoxia enhances the cardiotoxicity of the propellants.^{3,4,7,8}

That adrenaline in large doses given intravenously to dogs previously exposed to high concentrations of fluorocarbon compounds will produce cardiac arrhythmias was established by Reinhardt *et al.*⁹ in 1971 and confirmed by Clark and Tinston^{7,8} and by McClure.⁴ Under similar conditions, the last two investigators were unable to produce cardiac arrhythmias by the intravenous injection of large doses of isoprenaline. Clark and Tinston⁸ summarize their findings as

follows: "The experimental evidence given in the present paper does not . . . support the view that the use of asthma inhalers containing isoproterenol will result in death due to the cardiotoxicity of the isoproterenol, or the fluorocarbon propellants, or to the interaction of isoproterenol and hypoxia." This is the direct opposite of the position taken by Dr. Archer, who offers no work of his own to support his views.

In referring to the work of Brooks, *et al.*,¹⁰ Dr. Archer neglected to state that the occasional electrocardiographic changes seen after inhalation of propellants and isoprenaline were assessed by the authors as being inconsequential. In another experiment conducted in man,¹¹ two subjects were exposed to 1% fluorocarbon 12 for 2.5 hours and the E.C.G. continuously monitored. No abnormalities were observed.

A study which provides conclusive evidence of the safety of fluorocarbons 11 and 12 in clinical use was conducted in Germany.¹² Ten patients severely ill from a bronchopulmonary disease with a mean P_{aO_2} of 54.9 mm Hg and P_{aCO_2} of 47.2 mm Hg were given 10 inhalations of a propellant gas mixture during 10 consecutive breaths. No significant E.C.G. changes were observed. It would appear from this and other published data that Dr. Archer's apprehension about the safety of the pressurized bronchodilator inhalers in asthmatic patients is entirely unwarranted. I am, etc.,

ALEX SILVERGLADE

Riker Laboratories,
Northridge,
California

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Diagnosis of Childhood Spinal Muscular Atrophy

SIR,—Following your leading article (6 October, p. 2), I would like to draw readers' attention to the electromyographic findings in spinal muscular atrophy, and in particular to a phenomenon described by Buchthal and Olsen¹ from Copenhagen which appears to be pathognomonic of this condition. In addition to the usual findings in anterior horn cell disease, three-quarters of their patients showed regular spontaneous motor unit activity in relaxed muscle and in sleep. The frequency of these spontaneous discharges varied between 5 and 15/sec.

Since this report appeared I have looked for this phenomenon in many children with

neuromuscular diseases. Up to the present I have found such activity in most children who prove to have spinal muscular atrophy and not in any other condition. It can be found with needle or even surface electrodes providing one waits for relaxation to occur and may then continue for many minutes. It is doubtful if, in a child with the typical clinical picture and these electromyographic findings, a muscle biopsy is required for diagnostic purposes.—I am, etc.,

B. G. R. NEVILLE

Department of Paediatrics,
Guy's Hospital,
London S.E.1

- 1 Buchthal, F., and Olsen, P. Z., *Brain*, 1970, 93, 15.

Drug-induced Respiratory Disorders

SIR,—We read with interest your leading article on this subject (12 May, p. 320). In the paragraph dealing with pulmonary hypertension induced by appetite-suppressing agents, however, it is stated that this side effect cannot be reproduced in animal experiments. This statement, however, is valid only up to three years ago. In the meantime several reports have been published about this problem.¹⁻⁷ A more detailed study on the mode of action of anorectic drugs inducing pulmonary hypertension is to be published shortly.⁸

All these papers clearly demonstrate the hypertensive effect of certain anorectic drugs on the pulmonary circulation in animals.—We are, etc.,

K.-U. SEILER
O. WASSERMANN

Institut für Pharmakologie,
Christian-Albrechts-Universität,
Kiel

- 1 Brunner, H., and Stepanek, J., *Naunyn-Schmiedeberg's Archiv für Pharmakologie*, 1970, 266, 304.
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- 6 Mielke, H., Seiler, K.-U., Stumpf, U., and Wassermann, O., *Naunyn-Schmiedeberg's Archiv für Pharmakologie*, 1972, 274, 879.
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Pyridoxine and Parkinsonism

SIR,—In the treatment of Parkinsonism with levodopa it is often necessary to prescribe drugs to combat the nausea which occasionally occurs. It has been my practice to prescribe metoclopramide.

Recently some of my patients have relapsed with no alteration in the dose of levodopa and I discovered that these patients had had prescribed for them anti-nausea preparations containing pyridoxine.

I should like to draw attention to the fact that pyridoxine is contraindicated in patients with Parkinsonism and preparations which contain this drug should therefore not be used.—I am, etc.,

A. BARHAM CARTER

Neurological Unit,
Ashford Hospital,
Ashford, Middlesex

Giardiasis in England

SIR,—Two young men have recently been admitted to this department for investigation of persistent diarrhoea associated with the passing of pale, bulky stools and significant loss of weight. Both had just returned from a visit to India and stool cultures taken by their general practitioners were negative for pathogens. Microscopy of the stools, however, revealed numerous cysts of *Giardia lamblia*. Both patients were treated with metronidazole (Flagyl) with relief of diarrhoea and regain in weight.

This summer we have also seen an outbreak of giardiasis in a group of children who had just returned from a school cruise in the Mediterranean. Some of these children complained of abdominal pain and at least one was referred to a surgical unit.

G. lamblia is found throughout the world but is most common in tropical countries. Giardiasis normally presents as a mild enteritis, but severe infection of the small bowel may lead to malabsorption, which can lead to diagnostic difficulty unless microscopic examination of the stools is carried out. With increasing foreign travel giardiasis is likely to become more common in Britain.—I am, etc.,

A. M. GEDDES

Department of Communicable and Tropical Diseases,
East Birmingham Hospital,
Birmingham

Late Advertising of Hospital Posts

SIR,—Dr. T. D. Culbert's letter (13 October, p. 111) does require some comment. There are at least two good reasons for his four applicants neither attending for interview nor informing the hospital. They may never have received invitations to attend or these may have arrived too late. In any case, a well-run administration asks the candidate to confirm that he will attend. If no reply is received no one should be surprised if the candidate does not appear at the interview, though someone might trouble to check the clerical procedures.

Unlikely? Not at all. Last year I got 48 hours' notice to attend an interview for a consultant post at a London teaching hospital, and this only because I happened to ring the hospital on that day. The other candidates (who lived in London) had just 24 hours' notice.—I am, etc.,

ROGER HOLE

North Ormesby Hospital,
Middlesbrough

Medically Oriented Language Courses

SIR,—I have some reservations about the value of medically oriented language courses as suggested by the Chairman of the Medical Education Panel (8 September, p. 546). Let us, by all means, learn European languages to help us to become good Europeans and to participate in the riches of European culture. But the difficulties in communicating in a foreign language have little relation to technical words, which are usually easily recognized though they may have a French, German, or Italian form. Some years ago¹ I drew attention to the fatuity of publishing Russian dictionaries of medical terms, when in fact the only problem in many cases was