and such data would obviously be worth having.—I am, etc.,

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Intramuscular Injection and Coagulation Defects

SIR,—I read with interest the remarks of Dr. P. M. Jones (24 June, p. 770) on the danger of intramuscular injections in haemophiliacs. The danger also exists—and to a greater extent—in patients receiving anticoagulant therapy, especially heparin. In haemophiliacs only one system of coagulation is disturbed—that is, the intrinsic—whereas anticoagulant therapy influences both the intrinsic and the extrinsic systems. Heparin has also, through its antithrombin action, some effect on platelet aggregation. I have seen several patients treated with heparin by intravenous drip and one receiving an indanedione preparation in whom, after intramuscular injections, large intragluteal haematoma developed, extending into the muscles of the thigh. The haematoma formation was associated with acute exsanguinating anaemia and hypotension, necessitating prompt blood transfusion. One elderly patient—in another hospital—died because of rapidly progressive exsanguination and shock. Intramuscular injections should be avoided in every patient actually on anticoagulant treatment as well as in patients with other coagulation defects.

On the other hand, in my experience, the danger of intramuscular injections is far less in various thrombocytopenic states (idiopathic thrombocytopenic purpura, leukaemias, pancytopenias); it is known that platelets are not necessary for extrinsic coagulation. In such situations I have observed only transient extravasations (but without permanent crippling) and never large exsanguinating haematomas in the gluteal musculature. This was especially evident in several patients with severe thrombocytopenia due to marrow aplasia treated for many months with large intramuscular doses of testosterone propionate.—I am, etc.,

T. DYK

Municipal Hospital,
Gdynia, Poland

1 Dyk, T., Piotrowski, M., and Kostecka, W., *Polski Tygodnik Lekarski*. In press.

Asthma Deaths

SIR,—In suggesting in your leading article (28 November, p. 443) an answer to the question of the cause of the recent rise in mortality from asthma you seem to rely entirely on the paper by the epidemiologist Stolley.¹ He found that asthma mortality had increased decisively only in those countries in which aerosol bottles containing five times the usual concentration of isoprenaline were available. Unfortunately, there are too many exceptions to this rule. Thus in Denmark and Sweden, with modest but definite increases in asthma mortality, no strong-isoprenaline aerosols were available. Japan also had none of these preparations but had a high mortality throughout. Norway had, as you mention, a definite rise in asthma mortality, but it had only one-quarter to one-tenth of the consumption of

strong-isoprenaline aerosols compared with the United Kingdom. The Netherlands, on the other hand, had some of these aerosols, but no rise in mortality at all. These incongruities make the assumption of Stolley most doubtful.

Much worse is that there is no evidence that isoprenaline is cardiotoxic. It has been used for 30 years, and if it had caused cardiac deaths this should have been noticed. Asthmatics who die suddenly in an attack (and often have used catecholamines a short time beforehand) usually show at necropsy as the most prominent change many viscous mucous plugs in the bronchi, which obstruct breathing. There is nothing to contradict the assumption that they die from lack of oxygen, and indeed the arterial oxygen tension is found to be dangerously low in such cases. This is much more likely to be the cause of death than the isoprenaline. Moreover, in those patients who inhale isoprenaline or other catecholamines incessantly tolerance to them quickly develops. Every practitioner who sees many asthmatics (but not the epidemiologist) knows patients who, at a sudden deterioration of their complaint, start inhaling every hour or half-hour and soon complain that "it does not help any longer." This is the first sign of tolerance, a danger signal not to be overlooked. It occurs with a concentrated aerosol as well as with a dilute one. I first described it 20 years ago² and have mentioned it repeatedly since.^{3,4} The tolerance has also been shown experimentally to develop in animals and in man.⁵

It follows that abuse of isoprenaline can have, at most, played an indirect part in the increase of asthma mortality by creating tolerance to itself. The patient with severe asthma who has no other treatment is then left with an isoprenaline nebulizer that no longer helps him, and he may become an easy victim of a renewed attack unless he has other efficient remedies—aminophylline, potassium iodide, or corticosteroids. It has been well documented that in most fatal cases the patient had little or no corticosteroid to protect him.

I believe this answer to your question should be considered.—I am, etc.,

H. HERXHEIMER

London N.3

1 Stolley, P. D., *American Review of Respiratory Disease*, 1972, **105**, 883.

2 Herxheimer, H., *The Management of Bronchial Asthma*, London, Butterworth, 1952.

3 Herxheimer, H., *Lancet*, 1968, **2**, 216.

4 Herxheimer, H., *Lancet*, 1972, **1**, 98.

5 Connolly, M., Davies, D. S., Dollery, C. T., and George, C. F., *British Journal of Pharmacology*, 1971, **43**, 389.

Fracture of Lippes Loop

SIR,—Last¹ has recently reported 15 cases of fracture of the Lippes loop in utero; the average time the loop had been retained before fracture was 38 months, with a range of 22–67 months.

At this hospital we have seen a number of women whose loop has fractured apparently while being removed (though possibly it had broken spontaneously in utero in at least some cases). In virtually all these cases the loop had been inserted more than two years previously. Since every patient with a fractured loop has had to be admitted to hospital for removal of the remnant under anaesthetic, we have adopted the practice of removing loops after two years (that is, at the second annual check-up) and inserting

a fresh loop at the same clinic attendance. Many of the loops removed more than two years after insertion have had a rough, pitted surface and have lost their natural elasticity. Could this be due to a chronic "foreign body reaction" on the part of the endometrium?—I am, etc.,

J. R. LANG

Vom Christian Hospital,
Benue Plateau State,
Nigeria.

1 Last, P. A., *Journal of Obstetrics and Gynaecology of the British Commonwealth*, 1972, **79**, 190.

Radiology of Swallowed Earthworm

SIR,—It is well known¹ that roundworms (*Ascaris lumbricoides*) may readily be demonstrated on contrast examination of the small gut. They may show both as an intraluminal filling defect and because the worm's alimentary canal is outlined with ingested barium suspension. So far as I can ascertain, no one has previously reported the radiological findings with earthworms (*Lumbricus terrestris*) in the human alimentary tract.

The accompanying plain abdominal radiograph of a 3-year-old child shows material which is pretty obviously "dirt," yet it is arranged in an orderly fashion in a coil. Accordingly there was no hesitation in identi-

fying the opaque parts as ingested soil in the alimentary tract of an earthworm lying in the stomach. This was confirmed when the history was obtained. The child had indeed swallowed an earthworm and the worried parents had brought him up for reassurance.—I am, etc.,

T. HEALEY

Barnsley,
Yorks

1 Shanks, S. C., in *A Textbook of X-Ray Diagnosis*, ed. S. C. Shanks, and P. Kerley, Vol III, 3rd edn. London, H. K. Lewis, 1958.

Trichuris trichiura Infestation

SIR,—It should be emphasized that the *Trichuris trichiura* infestations reported by Dr. D. M. Lynch and others (14 October,

p. 73) refer specifically to 17 hospitals for the mentally subnormal widely scattered throughout the United Kingdom. Despite an alleged "overall infestation rate" of 13.2%, only seven of the 17 institutions showed infestation rates greater than 2.0%. Although the incidence within institutions in the south of England is given as 36.3%, three institutions close to the major study hospitals showed rates of only 1.3%, 1.3%, and 0.7% respectively. Trichuris infestation is a barometer of faecal pollution within specific institutions and should be so regarded. Overall infestation rates in these circumstances are meaningless.

The apparent male preponderance is biased by the inclusion of the two severely polluted wards for male patients in Essex (hospital 1). Similarly, the reported peak age incidence (11-30 years) appears to be dependent upon the inclusion of the Herts institution (hospital 2), where the patients were "mainly children (age 1-20)." In any case, infestation rates are more likely to be related to the sanitary habits of retarded inmates than to their chronological age.

Age (yr.)	No. Examined	No. Positive
1-3	125	17 (13.6%)
3-5	69	19 (27.6%)
5-7	100	34 (34.0%)
7-9	70	27 (38.6%)
9-11	63	32 (50.8%)
11-15	73	26 (35.6%)
Total	500	155 (31.0%)

In an investigation in the west of Ireland¹ 500 children were studied on admission to a general hospital for non-related reasons. The overall infestation rate within that community was 31%. Boys were more commonly infested than girls (68/267 v. 86/233). The age incidence is shown in the table. Classification by place of domicile revealed that city children were more likely to harbour whipworms (68/180 v. 58/218) than children from isolated rural homes (who are more likely to be in contact with pigs). Further positive correlations were found with increasing family size and decreasing family income, whereas the availability of adequate sanitary facilities was not apparently related.

T. trichiura is an interesting parasite from an epidemiological viewpoint, closely reflecting play habits and hygienic standards within populations. Uncritical acceptance of the epidemiological data presented by Lynch *et al.* will only serve to confuse the issue.—I am, etc.,

MICHAEL F. LOWRY

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Cleveland, Ohio, U.S.A.

¹ Lowry, M., O'Callaghan, J. M., Furnell, M. J. G., and Curtin, M., *Journal of the Irish Medical Association*, 1968, 61, 75.

Acute Dytonia due to Phenothiazines

SIR,—I want to thank Drs. P. S. Venkateswaran and A. G. Otto (21 October, p. 178) for drawing attention to this subject.

For years I have used many of the phenothiazine group of drugs in this hospital without any ill effects, but in the past few months I have been confronted with bizarre reactions in some of the patients taking them. A student who had attended the outpatient clinic earlier in the morning was brought back at night because he "couldn't get his tongue inside his mouth." He talked as if he was chewing his tongue. A few days

later a nurse who had attended a psychiatric clinic in another hospital came at night complaining of a heavy, immobile tongue and had actually bitten it in many places. Both of these patients had taken a single dose of 10 mg of trifluoperazine. Two young adults in separate wards suddenly began complaining of their faces being forcibly turned backwards until they fell back on the bed. At first I thought they were malingering. Both patients were on fluphenazine hydrochloride 5 mg at night. A boy of nine with severe burns was referred to me by the nurses, who felt that he had developed tetanus. On examination he had true risus sardonicus and bizarre movements affecting the jaw, but without the usual abdominal rigidity, head retraction, or spasms. He had been given 400 mg of meprobamate by mouth in the morning and 50 mg of promethazine hydrochloride intramuscularly in the evening; the movements had started five minutes after the injection. Apart from transferring him to a quiet isolating room, I did nothing. The next day I found him sitting up in bed eating.

In all these cases presenting with extrapyramidal symptoms I had held phenothiazine derivatives suspect. I have now banned the use of fluphenazine in the hospital since it is not possible to know which patients are likely to prove hypersensitive—some starting dystonic movements after a single tablet.—I am, etc.,

XTO G. OKOJE

Zuma Memorial Hospital,
Irrua,
Midwest Nigeria

Thrombus Formation in Dialysis Membranes

SIR,—I was interested in the paper by Dr. R. M. Lindsay and others (25 November, p. 454) because their results, which show platelet and fibrin deposition on dialyser membranes, are complementary to those of our own studies,¹ which have indicated that surface activation of coagulation occurs in dialysers by the finding of kinin enzyme activation, Hageman factor (factor XII) depletion, and increased production of platelet factor 4.

What I think should be emphasized is that heparin does not inhibit the initial steps of the "coagulation cascade" (activation of factors XII and XI) but has its earliest inhibitory action at the point of activation of factor IX. Surface-induced thrombosis is pre-eminent as the unsolved problem in the development of extracorporeal systems.—I am, etc.,

E. N. WARDLE

Royal Victoria Infirmary,
Newcastle upon Tyne

¹ Wardle, E. N. and Piercy, D. A., *Journal of Clinical Pathology*, 1972, 25, 1045.

Reorganization of the B.M.A.

SIR,—At a meeting of our committee on 3 December the following motion was unanimously carried, and I shall be glad if you will bring it to the attention of all B.M.A. members.

"The Denbighshire and Flintshire Local Medical Committee deplores the action of the Representative Body of the B.M.A., taken contrary to the advice of its own Council and of the Conference of L.M.C.s, to destroy the representative machinery of

general practice in the hope of increasing B.M.A. membership by concentrating power into its own hands and into the hands of a minute central executive constructed on commercial and managerial lines.

"The L.M.C. believes that the interest of the profession as a whole, its honour and dignity, must have priority over the claims of any medical organization, however large.

"The L.M.C. demands that general practice continues to be represented by a committee representative of, and elected only by, 100% of N.H.S. general practitioners. It calls on the General Medical Services Committee to maintain this position, if possible within, but if necessary outside the B.M.A. constitution. It calls on those doctors who are B.M.A. members to repudiate the divisive action of their Representative Body."—I am, etc.,

W. E. LEWIS

Secretary, Denbighshire and Flintshire
Local Medical Committee

Mold,
Flintshire

Plight of Uruguayan Doctors

SIR,—At the World Health Assembly in September 1972 it was reported that certain Uruguayan doctors had been imprisoned for rendering medical assistance to members of a revolutionary group and that, at the request of the Uruguay Medical Association, the W.M.A. had made an official protest to the Uruguayan Government.

In a statement dated 7 November 1972 the W.M.A. reported that this approach had been ignored, and the Uruguay Medical Association is now asking the various national medical associations to protest individually.

This matter was considered at the recent meeting of the Executive Committee of the British Supporting Group of W.M.A. It was reported that the B.M.A. was in touch with the Uruguay Medical Association on this, and our committee felt that there would be added weight to it if you, Sir, would publish the text of the W.M.A. statement, which reads, *inter alia*, as follows:

"For more than three months now four prominent Montevideo physicians—Drs. Luiz Felipe Diaz, Eduardo Isern, Carlos Benavides, and Washington Zapata—have been illegally held and physically abused in a Uruguayan prison. A military court found the four physicians innocent of the charges brought against them, but an order to release them issued by the Army Commander and Minister of Defence was ignored. Subsequently, both these government officials resigned their posts . . . A second release order has been ignored, and the doctors continue to be illegally held."

It is the ethical duty of each and every one of us to give medical help where necessary, regardless of politics, creed, or race, a duty enshrined in the W.M.A. declaration of Geneva. Through your columns, Sir, and through the world-wide distribution of the B.M.J. the attention of the whole profession can be drawn to the plight of certain fellow doctors who have carried out their duties in this respect. The Uruguay Medical Association should be assured that they have the wholehearted support of colleagues of every nationality in their struggle to obtain justice for their members.—I am, etc.,

W. NORMAN-TAYLOR

Chairman,
Executive Committee,
British Supporting Group of W.M.A.

St. Albans, Herts