have important implications in regard to other noxious substances at the present time readily available. Such difficulties should not dissuade the authorities from considering paraquat as a particular case. One could well argue that these other substances have not been involved in such serious poisonings as paraquat itself despite being under no greater restriction. This may well be in part because they are less toxic and more amenable to known forms of therapy.

I have personally been concerned for some time about the apparent ineffectiveness of controls over the use and distribution of paraquat. My action in writing this letter was precipitated by two very recent but unrelated instances of children being accidentally poisoned by paraquat in the Edinburgh area.

At the present time our community is being exhorted to care more about the quality of its life and its environment. I would make a plea to the medical profession to support a ban on the use of this highly dangerous weedkiller as I feel that this would be an important contribution in the field of preventive medicine.—I am, etc.,

A. A. H. LAWSON

Milesmark Hospital,
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Accidental Vaccination with Paraquat

SIR,—A man aged 30 used Gramoxone (which contains paraquat) to spray weeds near an orchard. He was wearing shorts and recalls being scratched lightly on the legs by the spines on the stems of *Galium aparine* (goosegrass) as he worked. He is uncertain when next he washed his legs but certainly had a bath within 24 hours.

He presented six days after exposure, by which time he had developed 10 to 12 lesions above and below both knees. They were linear, 6-12 mm wide and 5-15 cm long, running in various directions, slightly raised, red brown in colour and itching. Vesiculation was occurring at three intersections and developed to resemble a primary vaccination. There were no systemic symptoms. The urine paraquat level determined on the seventh day was less than 0.01 µg/ml. The lesions, dressed twice daily with Dequadin Tulle, resolved in 14-21 days, though marks were visible for some time afterwards. There were no sequelae.

Although the patient in this case suffered no more than discomfort and inconvenience, this report underlines the necessity of following the maker's instructions for the use of the spray, which specifies that protective clothing should be used.—I am, etc.,

P. J. BARBER

Warrington

Treatment of Acute Poisoning

SIR,—Dr. H. Matthew's recent contribution on "Acute Poisoning" (6 March, p. 519) is a most helpful refutation of myth-information. Only one point would warrant any serious disagreement: his championing of gastric lavage versus induction of emesis. Certainly neither approach can be viewed as any panacea. In Dr. Matthew's own experience¹ in only 17% of 165 patients suffering barbiturate poisoning was more than 200 mg of barbiturate actually recovered from the

gastric washings. While emesis certainly is contraindicated in the instance of the drowsy or unconscious patient, and though its returns may not be sizeable either, attention should be directed to the studies of Boxer, Anderson, and Rowe.² Responsible for treating large numbers of accidental ingestions, these authors assigned their paediatric patients (all salicylate ingestors) to one of two treatment groups. One group was treated by lavage which, upon completion, was followed immediately by induction of emesis. For the other group, the sequence of treatments was reversed. All stomach contents were saved and analysed for salicylates. Notably, when emesis followed lavage it led to recovery of twice as much salicylate as had lavage itself. In contrast, where lavage followed emesis, it resulted in augmenting recovery by less than 10% of the amount of salicylate originally removed by emesis.

Only last June, Goldstein³ cited two testimonial cases of purposeful ingestion by young adults in whom "adequate" lavage had been originally carried out with minimal return. Subsequent induction of emesis brought forth 25 tablets from one and at least 10-15 from the other.

Conceivably the future may see a resurgence of activated charcoal and its adsorptive qualities replace both of the forementioned approaches. Until that time, induction of emesis would seem to be warranted in many instances—particularly for children. Syrup of ipecac. or apomorphine are appropriate emetics. A plea is made, however, not to employ salt as an emetic agent. Four disasters following such an approach already have come to this writer's attention.—I am, etc.,

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¹ Matthew, H., Mackintosh, T. F., Tompsett, S. L., and Cameron, J. C., *British Medical Journal*, 1966, **1**, 1333.

² Boxer, L., Anderson, F. P., and Rowe, D. S., *Journal of Pediatrics*, 1969, **74**, 800.

³ Goldstein, L. I., *Journal of the American Medical Association*, 1969, **208**, 2162.

Fats and Multiple Sclerosis

SIR,—In your leading article entitled "Fats and Multiple Sclerosis" (5 June, p. 545) you discuss the possible suggestion of R. L. Swank that the high incidence of multiple sclerosis in some parts of the world can be related to dietary habits, and that in those areas diets generally tend to be rich in saturated fatty acids. Following this suggestion, he has suggested that modification of the diet for patients with multiple sclerosis in such a way as to reduce their intake of total fat and include a great proportion of unsaturated fatty acids will improve the patient's functional condition and reduce the relapse rate.

Against this very interesting theory are the established facts that the incidence and prevalence of multiple sclerosis among the two and a half million Afrikaans-speaking white population of South Africa is very low, only one-eleventh of the prevalence that occurs in immigrants from Britain and Northern Europe.¹ The English-speaking white South African-born have only one-fourth of the risk of the immigrants. White South Africans, particularly the Afrikaans-speaking, eat a diet that is particularly rich in saturated fatty acids. They often have fatty meat, such as

bacon or mutton, as much as three times a day. Death from ischaemic heart disease, coronary thrombosis, is very high among white South Africans and is particularly high among males below the age of 65, many of whom have a raised cholesterol.²

The high animal fat consumption and high morbidity and mortality from ischaemic heart disease among the white South African-born, particularly the Afrikaner, is in direct contrast to their low risk of developing multiple sclerosis and does suggest that a high fat diet cannot be the environmental factor that is responsible for this disease, although the epidemiological evidence does show conclusively that it is primarily a disease of the environment. The South African situation does not exclude the possibility that diet may be an additional factor, but it is certainly not the most important one, and the present epidemiological evidence suggests very strongly that multiple sclerosis is more likely to be caused by a virus infection of the central nervous system.³—I am, etc.,

GEOFFREY DEAN

Medico-Social Research Board,
Dublin

¹ Dean, G., *British Medical Journal*, 1967, **2**, 724.

² Dean, G., *South African Medical Journal*, 1965, **39**, July Suppl., p. 1.

³ Dean, G., *Scientific American*, 1970, **223**, 40.

Aspirin Allergy

SIR,—I felt really surprised when I read, in relation to aspirin allergy, in Dr. A. P. Smith's article "Response of Aspirin-allergic Patients to Challenge by Some Analgesics in Common Use" (29 May, p. 494) "... and lymphocyte transformation tests have been negative".

In our laboratory of the Institut d'Immuno-Biologie, Hôpital Broussais, we have been testing more than 300 patients with aspirin allergy, and when the clinical history had been taken properly, and what is very important, the patient was not taking any corticosteroids for more than three weeks, lymphoblastic transformation tests were regularly positive.

First results were presented at the Société Française d'Allergie¹ in February 1967. Further results have been presented and discussed widely recently at the 7th International Congress of Allergology in Florence.

We believe that sometimes intolerance to aspirin may occur, but when a patient is suffering from the "triple syndrome" with late and infectious asthma, nasal polyps, and allergy to aspirin, a lymphoblastic transformation test should be performed, if the patient can breathe for three weeks without any corticosteroids or immunosuppressive drugs.—I am, etc.,

M. HALPERN

Editor, *Allergie et Immunologie*

Paris

¹ Halpern, B. N., Ky, N. T., Hazard, J., Amache, N., and Lagrue, G., *Revue Française d'Allergie*, 1967, **7**, 190.

Aortic Aneurysm and Peptic Ulcer

SIR,—We read with interest your leading article on the association of peptic ulceration with abdominal aortic aneurysm (16 January, p. 129). We recently noted a similar link between peptic ulceration and occlusive arterial disease of the lower limbs.

Our attention was first drawn to this association when in the course of a month three patients developed complications from chronic duodenal ulcer while recovering from arterial operations. We were also impressed by the large proportion of patients with a history of previous gastric operations among those who presented with ischaemic symptoms of the lower limbs.

Prompted by these clinical observations we studied the inpatient records of 180 consecutive patients admitted to Hammersmith Hospital between the years 1964-9 for investigation of ischaemic symptoms of the lower limbs. All were males above the age of 50 years. In every case arterial lesions compatible with the diagnosis of arteriosclerosis were demonstrated on arteriography.

Although at the time of admission no special attention was paid to dyspeptic symptoms 38 (21.1%) of the 180 patients were recorded to have peptic ulcers or a history of such; 23 had had gastrectomy, one vagotomy and pyloroplasty, one closure of a perforated duodenal ulcer, and in the remaining 15 the diagnosis of gastric or duodenal ulceration was made on barium meal. This figure (21.1%) is remarkably similar to that recently reported by Jones *et al.*¹ in patients with abdominal aneurysm (22.6%). They studied postmortem reports of patients with aneurysm while we studied inpatient records; our methods are more likely to underestimate the true incidence of peptic ulceration, and it may be therefore that the association between occlusive arterial disease and peptic ulceration is even greater than that with abdominal aneurysm. In any case, in both conditions the incidence of peptic ulcerations seems significantly higher than in a comparable section of the general population (7%). The practical implication of this association seems to belong to the time immediately after an arterial operation, when exacerbation of a chronic ulcer may lead to complications. It may influence also the decision to use anti-coagulants.

It would be interesting to speculate on the significance of this association, but in this brief communication we shall refrain and state only that it remains unexplained. We are presently carrying out an analysis of our cases and we hope to report and discuss our findings more fully in the future.—We are, etc.,

A. P. BARABAS
J. BOUHOUTSOS
PETER MARTIN

Hammersmith Hospital,
Royal Postgraduate Medical School,
London W.12

¹ Jones, A. W., Kirk, R. S., and Bloor, K., *Gut*, 1970, 11, 679.

Theatre Fire

SIR,—Recently a fire occurred during surgery under general anaesthesia when no explosive gases were involved. This accident has shown that what until now was considered a perfectly safe procedure entails a remote risk of fire, and in reporting it I seek to bring to the attention of surgeons and anaesthetists the fact that a procedure which has been used without mishap many thousands of times has, once in the U.S.A. and once in this country, resulted in fire.

A rodent ulcer on the left upper lid of a

20-year-old man was to be removed. Since intubation was impossible an airway had been inserted, which was held in place by adhesive plaster. The airway was connected to an expiratory valve, and a length of rubber tubing led beneath the drapes to the anaesthetic machine. The patient was breathing a mixture of nitrous oxide (3 l./min.), oxygen (5 l./min.), and halothane 4%.

"Towelling-up" consisted of covering the face with a polyester foam drape in which an opening had been cut to leave the operation site free. Placed over this was a paper sheet, some 2 ft (52 cm) square, and over all, a blue cotton drape covered the entire body. A head-band ensured that all the drapes were held close to the scalp.

The lesion was excised and control of the bleeding started. But as soon as the contact button on the hand cautery was touched, the whole area became instantaneously engulfed in flames. Though the drapes were immediately ripped off, and the fire put out, the patient suffered burns to his face and neck.

It was found impossible to ignite the polyester foam by touching it with a hot cautery, either in air or in an oxygen-enriched atmosphere. If, however, there was a "primer" in the form of a hair or a wisp from a cotton gauze swab, then ignition was immediate if in an oxygen-laden environment.

The similarities to an earlier report¹ are remarkable. In that instance, a rodent ulcer was being removed from a lower lid under local anaesthesia. To assist the patient, a tube from an oxygen cylinder was held to the cheek with adhesive tape. As soon as the cautery was used, fire broke out.

A fire in an atmosphere of oxygen has to be seen to be believed. The flames do not spread as in a conventional fire, but rather the whole area becomes a mass of flames instantaneously.

The method of towelling-up, as we have described, which was our routine at the time, presumably allowed gases from the exhaust-valve, which was beneath the drapes, to be channelled up to the polyester foam, and so out through the opening in it. This foam is porous and multicellular, and can hold gases; it is thus a material which, once ignited, will burn with great rapidity.

In the light of this experience I should like to make these recommendations:

- (1) Polyester foam should not be used as a drape, but a thin, flexible, impervious material should be sought as a substitute.
- (2) Where possible, exhaust-valves should not be sited beneath the drapes.
- (3) As low a temperature as is compatible with surgical needs should be used on the cautery since this will minimize the risk of ignition.

I would like to thank the consultant staff of Moorfields Eye Hospital for encouraging me to report this case.

—I am, etc.,

ANDREW ELKINGTON

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London W.C.1.

¹ Magruder, G. B., and Gruber, D., *Archives of Ophthalmology*, 1970, 84, 237.

Cystic Degeneration of the Popliteal Artery in a Female

SIR,—Although some 40 cases of cystic degeneration of the popliteal artery have been reported to date (19 December 1970, p. 69)

only five cases have been described in women.¹ A sixth case is now reported.

A 32-year-old housewife presented in December 1968 with a two-month history of intermittent claudication in the right leg. She also complained of increasing coldness of the right foot after exercise.

On examination the right foot was cooler than the left. The popliteal and pedal pulses were absent on that side although the femoral pulse was readily palpable. Otherwise clinical examination was negative. Femoral arteriography showed several smooth occlusions of the popliteal artery (Fig.)

At operation a segment of the popliteal artery approximately 5 cm long was found to be swollen and beaded in appearance. It was non-pulsatile. On incision of the adventitia clear jelly-like material escaped under tension from within the layers of the vessel wall. The arteriotomy was completed and no evidence of thrombotic occlusion or atheroma was found. A Fogarty catheter was passed upwards and downwards along the vessel in order to ensure that a thrombus had not been overlooked. The arterial incision was closed with a continuous everting suture. Good pulsation was observed and operative arteriography showed the popliteal artery to be patent without significant narrowing. The postoperative recovery was uneventful and she was discharged 12 days after operation. Pathological examination of the cystic material showed it to be amorphous mucus.

At review in May 1969 she was symptom-free, but subsequently she noticed tightness of the calf of her leg if she walked quickly. When seen in January 1971 this symptom