the cases fulfilled the criteria of sarcoidosis as defined by Scadding,³ the majority of patients did not present in the usual way with sarcoidosis, and indeed a survey of chest clinic and eye and skin department material has been unprofitable in revealing cases with myocardial involvement. These chiefly present with the cardiac problems of heart block, difficult tachyarrhythmias, frequent ventricular extrasystoles, sudden death, and congestive cardiac failures, in that order of frequency.

Twenty patients in the series have died and the diagnosis has been confirmed post-mortem. In all, other organs were involved, often to a clinically undetectable degree. In many cases sarcoid involvement of the heart was massive, and in these the classical sarcoid granulomatous tissue with large numbers of giant cells was widespread. In less massive involvement the ventricular septum appears to be the site most commonly affected.

I am preparing the full results of this study for detailed publication. A preliminary report of over 40 cases was made to the Sixth European Congress of Cardiology in Madrid.³ It was there suggested that the diagnosis of sarcoidosis should be considered in any patient presenting with a cardiomyopathy of unknown aetiology, particularly if there are frequent ventricular premature systoles, or in any patient who presents with a serious rhythm disturbance of any type. The success of steroid treatment will depend on how massive is the sarcoid involvement of the heart.

This study has been made possible by the generous co-operation of colleagues allowing me access to their material. I would be glad to have details of any further cases.—I am, etc.,

HUGH A. FLEMING

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- 1 Ghosh, P., Fleming, H. A., Gresham, G. A., and Stovin, P. G. I., *British Heart Journal*, 1972, 34, 769.
- 2 Scadding, J. G., *Sarcoidosis*. London, Eyre and Spottiswoode, 1967.
- 3 Fleming, H. A., *Revista Española de Cardiología*, Proceedings of the 6th European Congress of Cardiology, Madrid. In press.

Spin Dryer Injuries

SIR,—Mr. C. S. B. Galasko (16 December, p. 646) rightly draws attention to the dangers associated with the use of spin dryers. I realize that the pictures of trauma vary from one part of the country to another. In my experience in the north-east of England, I have seen these injuries about 12 times a year in casualty departments receiving 40,000-50,000 new patients a year. These injuries are not confined to children and are replacing the "wringer injury." As with wringer injuries, soft-tissue damage is out of proportion to the bony damage; this is due to the tremendous rotational forces involved. Unlike wringer injuries, these are not virtually confined to the appliances made by one manufacturer.

Spin dryer injuries are related to the kinetic energy involved. It therefore follows that the large drums which mostly rotate on a horizontal axis tend to produce much more severe injuries than small drums, which generally rotate on a vertical axis, where the speed of revolution is similar. Horizontally rotating drums are more accessible to children.

The most common injuries affect the fingers—generally there is dislocation at the proximal interphalangeal joint. This may be inadequately treated by the casualty officer, for the fact that one or both collateral ligaments are torn may be overlooked. However, about one-third of these injuries are compound and it is, I hope, unlikely that an inexperienced casualty officer would be left to deal with these. On occasions, multiple digits may be dislocated.

Injuries at higher levels than the fingers are generally not associated with injuries to the hand, just as injuries to the humerus are unlikely to be associated with injuries below this level. I have seen seven spin dryer injuries to forearm bones, five of which occurred in children. It is again important to realize that damage to soft tissues associated with these injuries is often much more extensive than an x-ray of the forearm would lead one to suppose. Ischaemic contracture and muscle fibrosis must be regarded as definite risks, and forearm decompression may have to be considered.

I have seen three fractures of the humerus from this cause. Once again, soft-tissue damage predominates, and it is not easy to identify the anatomy at the site of injury. I have been more fortunate than Mr. Galasko in that in my worst experience of this type of injury at this level all structures were divided apart from the neurovascular bundle containing the median and ulnar nerves. Progress in this child has therefore been quite good.

I must point out that all the spin dryers that I have seen do in fact have some device either to prevent the dryer being opened while in motion or to arrest the dryer when the lid is opened, though it may be possible to bypass the latter type of device. Injuries occur when the safety devices fail, failure of the former type resulting in more severe injury than failure of the latter. It is not easy to suggest what further steps manufacturers could take. I would refer those interested to British Standard 3456 B6, which specifies that with the latter type of device the drum should stop spinning within 10 seconds of the lid being opened. This standard comes into force in 1974. Which? in March 1971 reported on the mechanical safety of these devices and found that with most makes the drum in fact stopped within five seconds of the lid being lifted.—I am, etc.,

PAUL R. J. VICKERS

Middlesbrough General Hospital,
Teesside

Side Effects of Benorylate

SIR,—Benorylate is the esterification product of paracetamol and acetylsalicylic acid. It has been shown to have fewer gastrointestinal side effects, including blood loss, than aspirin or an equimolecular mixture of aspirin and paracetamol^{1,2} while retaining their analgesic and anti-inflammatory properties.³ Recorded side effects have been nausea, constipation, indigestion, heartburn, drowsiness, tinnitus, dizziness, and skin rashes. Here we report the case of a patient who was unable to tolerate the drug because of diarrhoea.

A 67-year-old woman with a three-year history of rheumatoid arthritis was admitted with severe active arthritis in her shoulders, elbows, wrists, and metacarpophalangeal, proximal interphalangeal, and knee joints. She was

found to be iron deficient; this was attributed to the salicylate therapy which she had been receiving almost continuously for two years.

She was treated with prednisolone at low dosage (7.5 mg daily), indomethacin suppositories, ferrous gluconate (Sidros), digoxin, pyridoxine, and 5 ml of Benoral (containing 1 g benorylate) in suspension was given four times daily. At this dosage the patient noticed lower abdominal discomfort within five minutes of taking the benorylate, and the discomfort passed off after a further five or 10 minutes. After three days, because of joint pain between doses, the dosage of Benoral was increased to 8 ml five times daily. At this dosage the patient noticed lower abdominal colicky pain within 10 minutes of taking the benorylate, followed within five minutes by an urgent call to stool, the motion being very loose and on occasions watery. No blood was observed and faecal occult blood tests were negative. All drugs except the oral steroids and benorylate were stopped, but the symptoms persisted for two more days until the benorylate was discontinued, since when no further diarrhoea occurred.

We feel confident that the diarrhoea was related to the benorylate and, so far as we can determine, is a hitherto unrecorded side effect.

We are grateful to Dr. D. Mattingly for permission to publish this case.

—We are, etc.,

A. J. MARSHALL
PETER SHERIDAN

Royal Devon and Exeter Hospital,
Exeter

- 1 Cuddigan, J. H. P., *Abstracts of the VII European Rheumatology Congress*, No. 45, 7 June 1971.
- 2 Lièvre, J. A., *Information Thérapeutique*, 1969, 7, 49.

Treatment of Massive Pulmonary Embolism

SIR,—The case reported by Dr. R. J. C. Hall and others (16 December, p. 647) is further evidence of the effectiveness of streptokinase in the treatment of massive pulmonary embolism.

The conclusion that the drug was successful in lysing clot in the pulmonary arterial tree was based on clinical assessment—the patient's general state, recovery from dyspnoea, lowering of central venous pressure and pulse rate, etc. While this is probably acceptable, the absence of precise objective evidence of thrombolysis, such as could have been supplied by further pulmonary angiography or lung scanning, prevents any accurate assessment of the effective dose of streptokinase and its rate of infusion. The authors used a 41-hour infusion with a total dose which we calculate to have been 4,650,000 units. In our experience of nine cases of massive pulmonary embolism treated successfully with streptokinase—monitored before, during, and after streptokinase treatment by lung scanning—a 12-hour infusion of 1,500,000 units has been adequate to produce lysis of thrombus in the pulmonary artery. The present report states that within eight hours the patient was greatly improved. This suggests that lysis was advanced by that time. In this context it should be remembered that thrombolysis will continue for periods up to days after the cessation of streptokinase therapy. Furthermore, many of the dangers of streptokinase therapy, particularly in relation to fibrinogen rebound, exhaustion of plasminogen, and rethrombosis, are more likely to occur the longer the infusion lasts and, in fact, sometimes do occur even during pro-

longed infusions. In the absence of objective evidence that a 41-hour infusion was necessary in this case, may we suggest that a shorter infusion and smaller dose, preferably delivered via the central venous pressure cannula, would have been just as effective, probably safer, and certainly much less expensive?

The source of massive pulmonary embolism is always the iliofemoral segment (proximal to the profunda vein termination). In the absence of clinical signs in the legs the iliofemoral thrombus is non-occlusive, so that ultrasound examination, just as much as clinical assessment, is an inadequate method of investigation. In these circumstances only phlebography can give the information required as to whether there is further thrombus in the iliofemoral segments or not. Phlebographic assessment of the iliofemoral segments as soon as the patient's clinical condition allows (in this case presumably about eight hours after the period of streptokinase treatment) and thereafter at about one week, is in our experience necessary to define the risks of recurrent embolism and to deal with persistent residual or recurrent non-occlusive thrombus by its removal.

We wish to support the idea that streptokinase therapy is now probably mandatory in the treatment of major pulmonary embolism and would congratulate the authors on the successful outcome of their difficult antepartum case.—We are, etc.,

G. E. MAVOR
D. R. HARPER
P. W. H. WOODRUFF

Royal Infirmary,
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Platform Nails

SIR,—I report a new and, I believe, increasing form of traumatic nail dystrophy.

I have seen four patients who presented with symmetrical haemorrhage beneath their big toe nails. They were unaware of any trauma having initiated the trouble. Their complaints included pain but the presenting symptom was the physical appearance of a blue-black discolouration of the nails in all four cases (see figure). Fungal and bacteriological examination and culture of clippings of the affected nails were uniformly negative.

All four patients had been wearing new fashion shoes with thick soles and heels. These "platform" shoes do not allow the normal rocking movement of the foot to be accommodated during walking. The result is that the patient's foot rocks inside the rigid shoe, so producing repetitive trauma of the most distal part of the foot (which is

usually the big toe) against the upper welt or vamp of the shoe. This effect is not seen if the shoe style is "peep-toe."

In the patients seen, the affected nails separated proximally and were lost. The new nails were normal. With the current vogue for this type of shoe it is likely that this problem will be seen more frequently.—I am, etc.,

JOHN ALMEYDA

The London Hospital,
London, E.1

Making Hospital Geriatrics Work

SIR,—All who care for elderly patients in hospital will have been interested in the paper by Drs. H. M. Hodgkinson and P. M. Jefferys (2 December, p. 536). As they point out, the bigger the general medical ingredient in the geriatric case load, the easier and quicker the turnover. Also the quicker the patients are admitted the quicker (and the more likely) they will be discharged. This knowledge is the key to the unblocking of the beds, because it is clear that the likelihood of doing good medically diminishes rapidly with the length of wait for admission. Thus, when the waiting list builds up, the consultant in charge must for a time take only the most recently referred cases, and even then only if a reasonable degree of Isaacs's "therapeutic optimism"¹ exists. Once the turnover begins to improve he can work backwards cautiously through his waiting list and eventually take the least rewarding case (in therapeutic terms). This seemingly harsh form of management can restore the essential dynamism to an ailing department. Many elderly people who could benefit by admission will be denied treatment until the beds are unblocked. The sooner this takes place the better.

Well-staffed geriatric departments can achieve good medical results only to be frustrated by the lack of back-up services. The majority of patients become fit for discharge from hospital, but many of these are unable to manage without a well-protected home environment. If there is to be further expansion of care for the elderly, high priority must be given to the non-hospital sector.—I am, etc.,

WILLIAM DAVISON

Cambridge

¹ Isaacs, B., *British Medical Journal*, 1971, 4, 282.

Nurses for Nursing

SIR,—It appears that sniping at Salmon is replacing fly-fishing as the popular pastime for consultants. I was pleased to see the spirited and reasoned reply by Miss Rachel Worsley (23 December, p. 727). So often the case for Salmon has gone by default.

Many of my colleagues who yearn nostalgically for the days before the introduction of Salmon seem to ignore the simple fact that if all had been well in the nursing profession the Salmon Committee would never have had to be set up. The Salmon Committee has designed a nursing staff structure that will bring into the profession many men and women who formerly would not have been attracted by it. They have gone hitherto into other disciplines such as teaching, the law, medicine, and industry. The new structure will encourage others to remain in the profession who would other-

wise have sought to realize their ambitions elsewhere. All this will not happen immediately. It will take three, five, or more years before those attracted by the new structure enter the profession, qualify, and work their way up to positions of responsibility and influence. Meanwhile, some of those already in post have to acquire new skills of management and learn how these are best applied. They have to instruct their staff in techniques of communication and deal with the teething troubles that are inseparable from any radical change. The medical profession in its turn has to abandon some entrenched positions and learn to accept members of the nursing management on committees where they have not appeared before.

May I make a plea for an expectant attitude. Let us have a moratorium of criticism for three years, and if Salmon is not showing signs of succeeding in that time, then let the pens be taken up once more.—I am, etc.,

REX BINNING

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Brighton

Wax in the Ear

SIR,—I was extremely surprised that your leading article (16 December, p. 623) failed to mention the part played by hair washing in the formation of wax in the ear, particularly with the more detergent-type hair shampoos now employed. Surely the seepage of soap and/or shampoo into the external auditory meatus must interfere with the composition of normal wax and upset its natural movement outwards.—I am, etc.,

A. H. DUNKLEY

Bordon, Hants

Duodenogastric Reflux and Pyloric Surgery

SIR,—Duodenal ulceration with stenosis is a well recognized cause of lesser curve gastric ulcer. In my own work 25% of gastric ulcer patients have had duodenal disease. McNeil, McAdam, and Hutchison¹ reported 30% with duodenal ulceration. Probably Messrs. A. G. Johnson and K. W. Reynolds (16 December, p. 667) would agree that vagotomy complete to the stomach with a good drainage operation would in these circumstances cure both lesions.

I have thought and written² that pyloric channel disease is the commonest cause of lesser curve gastric ulcer. I was therefore pleased to read that Messrs. Johnson and Reynolds recognized the existence of this forgotten disease of the pylorus and prepyloric stomach and that it could give rise to lesser curve gastric ulcer. If vagotomy cures pyloric channel disease (as it does) we should expect it to cure the secondary gastric ulcer when the operation is not followed by gastric retention. Pyloroplasty or gastrojejunostomy alone are irrational in the treatment of lesser curve gastric ulcer secondary to these two diseases at the gastric outlet. Neither cures duodenal ulceration and Serck-Hanssen³ reported many years ago that gastrojejunostomy did not cure pyloric channel disease. If, as I believe, all patients with lesser curve gastric ulcer have disease at the gastric outlet then proximal gastric vagotomy without drainage is a very logical operation in all cases, a drainage operation