occurred after this procedure, which could be applied in other parts of the body. The precautions to be observed include using the shortest possible time of aortic occlusion and the use of a non-toxic medium for the inflation of the balloon in case it ruptures.

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Facet joints and low back pain

SIR,—Dr G Symonds (22 April, p 1057) asks for the evidence that low back pain with radiation to the leg can be attributed to the facet joint. This clinical syndrome has unfortunately not received the publicity it deserves. Ghormley,¹ writing in 1933 on the facet joint, states: "I feel not only that they are causes of sciatic pain but that they may be causes of lumbosacral pain with or without sciatic pain" and coined the term "the facet syndrome."

In a paper published in 1976 Mooney and I² not only demonstrated the patterns of referred pain but also showed reflex activity in the hamstring muscles and that limitation of straight leg raising could be produced by stimulation of a lower lumbar facet joint.

Knowledge of the basis of pain production in the lower lumbar region is still limited, but I would advise that pathological changes in the facet joint should be included in the list of differential diagnoses whenever a patient complaining of low back pain with possible radiation to the leg but without a true neurological deficit is seen.³

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¹ Ghormley, R K, *Journal of the American Medical Association*, 1933, **101**, 1773.

² Mooney, V, and Robertson, J A, *Clinical Orthopaedics*, 1976, **115**, 149.

³ Badgley, C E, *Journal of Bone and Joint Surgery*, 1941, **23**, 481.

SIR,—May I be permitted to rise to the bait offered by Dr G Symonds (22 April, p 1057) when he implies that lesions of the facet joints are not common causes of lumbago and sciatica? I do so in support of your leading article (1 April, p 808) as I believe that much standard medical education in the decades 1940-70 overplayed the large role of the intervertebral disc in the production of lumbar problems so that many doctors have found difficulty in helping patients with lumbago and sciatica due to other causes. Since the group with such problems is large and their problems can be diminished greatly by education alone I believe it to be helpful to understand why such a group exists and how they can be helped.

The basic work of Kellgren¹⁻³ in demonstrating the effects of injury to various spinal structures in the production of backache and pain down the lower limb indicated that damage to the intervertebral joints could produce backache and referred leg pain (but not altered sensibility, loss of power, or altered reflexes).

The structure of the intervertebral joints differs in no fundamental respect from that of any synovial joint such as the knee joint—that is, there is the usual articular cartilage and innervated synovial line and joint capsule. These joints suffer from degenerative arthritis

in the same way as the knee joint. The degenerative changes show radiographically and are very easily seen in the post-mortem room or the operating theatre. The response of the intervertebral joints to injury is similar to that seen so commonly in the knee joint in middle-aged men, in whom a minor twist may produce discomfort followed by an ache and swelling within a few days and tenderness over the medial joint line and a slow spontaneous recovery. Where the joints differ is that the back joints are surrounded by very strong muscles whose protective spasm may of itself produce pain and load the sprained joints and increase discomfort arising from them.

The production of injury to the worn back joints is similar to the production of injury in any other joint—either a specific individual strain or, commonly, the postural strains of standing or sitting badly. Anything which decreases the controlling muscle supports of the back, belly, and buttock (such as fatigue) will predispose to strain, as will anything which increases lumbar lordosis (such as overweight or high heels).

In a letter there is insufficient scope for a full explanation of the treatment of acute sprains or of the chronic sprains of these joints, but the fundamental principles differ in no important respect from those which most people would apply to treatment of a sprained ankle. These include: (1) anything which hurts does harm; and (2) all painless movements do good.

To prevent recurrences I suggest treating the patients by "organised neglect." This constitutes reminding them that "brave patients do badly" and "persistent cowards do well"—the persistent coward keeps in training by painless exercise and avoids unreasonable lifting or postural stresses. The "neglect" element is designed to eliminate the fear instilled in so many that they have a mysterious disc problem instead of the very common, indeed invariable, degenerative problem of the second half of life.

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¹ Kellgren, J H, *Clinical Science*, 1938, **3**, 175.

² Kellgren, J H, *Clinical Science*, 1939, **4**, 193.

³ Kellgren, J H, *Clinical Science*, 1939, **4**, 303.

Vacuum pipelines for anaesthetic pollution control

SIR,—Dr B M Wright (8 April, p 918) is critical of the reasons advanced by Dr M Rosen (21 January, p 176) and the DHSS's health circular HC(76)38 deprecating the use of piped vacuum to scavenge waste anaesthetic gases. We are not reassured by the arguments he advances, as we believe that the use of piped vacuum for this purpose introduces a potential hazard to the patient. The existence of this hazard has been pointed out in the relevant health circular. It results from the great disparity between the negative pressure in the piped vacuum system when compared to that required for safe scavenging of anaesthetic gases. The vacuum in the pipeline is approximately 1000 times in excess of the requirement for scavenging and this means that there is a very onerous safety requirement for the design and use of any equipment which limits the suction at the scavenging point. A perforated hood¹ has been suggested, but we feel that this offers an inadequate

margin for patient safety. If such a device is used widely, eventually, either by accident or by design, some or all of the holes will become obstructed; one possibility for such obstruction is presented by the increasing use of impervious plastic surgical drapes. The result of such obstruction will be that a considerable negative pressure will be applied to the patient's airway, the deleterious effects of which have been recognised in relation to endotracheal suction.²

An alternative system for active scavenging using existing equipment is to connect to the extract side of the theatre ventilation system at a point where it is not possible to generate a greater negative pressure than 0.5 cm H₂O. When this is used in conjunction with a suitable safety block³ to provide pressure relief and a visual indication of the functioning of the whole extract system, safe, practical, and inexpensive scavenging is possible. In most British operating theatres a suitable point for connection to the theatre extract can be found in relation to the ducting connected to the mechanical extract point provided in accordance with Hospital Building Note 26 (1967) in each anaesthetic room. As this mechanical extract is specifically provided "because of the presence of gases" no problems should arise from such a connection. In the very few theatres with a recirculating system careful siting will be needed of the scavenging connection to the ducting which carries that percentage of the airflow which is not recirculated. It is hoped that in the design and installation of theatre ventilation systems in the future suitable points for connecting scavenging systems will be provided not only in the anaesthetic room but also in the operating theatre.

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¹ Davenport, H T, *et al*, *British Medical Journal*, 1976, **2**, 1219.

² Rosen, M, and Hillard, E K, *British Journal of Anaesthesia*, 1960, **32**, 486.

³ Bethune, D W, Collis, J M, and Latimer, R D, *Anaesthesia*, 1976, **31**, 1254.

Bleeding gastric erosion after oral zinc sulphate

SIR,—I was interested to read the report by Dr Ray Moore (25 March, p 754) of a case of bleeding gastric erosion following oral zinc sulphate and the comments by Drs M M Molokhia and Benjamin Portnoy (29 April, p 1145).

Frommer in 1975¹ carried out a double-blind trial on patients with benign gastric ulcer. Ten were given zinc sulphate 220 mg three times a day and eight were given a placebo. After three weeks patients taking the zinc sulphate had an ulcer healing rate three times that of the patients taking the placebo, and more patients in the zinc sulphate group achieved complete healing. The hydrochloric acid content in the gastric juice is high in many patients with gastric ulcer, especially if the ulcer is near the pylorus and pylorospasm is present, so that the likelihood of zinc chloride being formed by the action of the hydrochloric acid on the zinc sulphate is greater in ulcer patients than in the normal population.

Although the numbers are small, these findings appear to show that, in spite of the

corrosive action of the zinc chloride formed, zinc sulphate has a therapeutic action in the case of gastric ulcer, while the same drug may have a damaging effect on the intact mucous membrane, apparently being capable of causing gastric erosion and haemorrhage.

ALAN A MORGAN

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¹ Frommer, D J, *Medical Journal of Australia*, 1975, **2**, 793.

Gin Seng and mastalgia

SIR,—In recent months there have been several advertisements advocating the re-juvenating properties of various proprietary medicines. Gin Seng is one such preparation and is derived from the root of several species of the *Panax* genus of plants. It is commonly held to have no medicinal virtues other than those of a demulcent.

However, we wish to report the case of a 70-year-old woman who developed swollen, tender breasts with diffuse nodularity after taking Gin Seng powder regularly for three weeks despite experiencing a general feeling of "well being." Her breast symptoms and signs settled after cessation of Gin Seng. The patient had two further trials with this preparation and on each occasion the same effects were noted. Serum prolactin levels were measured both while the patient was taking Gin Seng and when she was not and the values were normal on each occasion.

Perhaps Gin Seng has a mild hormonal activity. We would be interested to hear whether any similar effects have been noted with this preparation.

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Hyperbaric oxygen

SIR,—I read with interest your leading article on hyperbaric oxygen (22 April, p 1012). I was, however, surprised at the omission of Monsall Hospital from the list. This department has had an active hyperbaric unit (single-patient hyperbaric oxygen chamber) functioning since 1967 and admits patients from a very wide area of the North-west. In 1977 alone 10 patients with gas gangrene were treated in the unit.

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Flight from specialist medicine

SIR,—By a rather significant coincidence on 27 April the newspapers were full of speculation about the doctors' pay settlement on the same day that I was, as tutor, presiding over an appointments committee at this hospital.

This committee was appointing junior doctors to linked hospital/general practice training posts. The response to the advertisement was overwhelming, about 50 candidates applying for four posts. They were of such outstanding quality that the process of short-listing consisted of elimination of those candidates not able to offer a first-class degree

at Oxford or Cambridge, open scholarships, prizes, or some other such mark of academic excellence. Among the candidates were a doctor who had nearly completed training in haematology and a doctor who already possessed several higher qualifications in surgery and who must have been within a year or two of the necessary qualifications to apply for a first-rate consultant appointment. This is in painful contrast to the small handful of foreign medical graduates who apply for posts linked to specialist training. Some of these doctors are, of course, good specialist material, but they are seeking higher qualifications in order to return to specialist practice in their own countries.

The Department of Health is said to be concerned about the headlong decline in the recruitment of British graduates to specialist medicine. Some of us had believed that it was inevitable that the Government should use the present pay review to make at least a gesture towards the correction of the scandalous inequities in medical salary structures since there is no doubt that, although many factors determine the flight from specialist medicine in Britain, pay is the major one.

One can only take an extremely pessimistic view of the prospects for consultant practice in the National Health Service. Although it seems inevitable that there will be a continuing erosion of the numbers of specialists practising in the United Kingdom, I would hope that the profession would do what it can to ensure at least that the standards of practice are not allowed to fall. We must work through the universities and the royal colleges but, above all, through advisory appointments committees to ensure that, in this present situation of famine of talents, the seed corn is not consumed.

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Deputising services: new code of practice

SIR,—I was incensed to read Mr David Ennals's introductory remarks for the new deputising services code (15 April, p 998). He said, that "The GP is entitled to reasonable leisure time, but I am determined that this should never be at the expense of the service to patients."

The deputising code relates almost completely to work at weekends and between 6 pm and 9 am. However, the organisation and realistic cost of such a service is a non-starter for Mr Ennals. His priority for payment is low, and provided the patients are seen, whatever the hour of day or night, will not improve.

Point 4 of the new code says, "The doctor must visit if requested." This may make good business sense if the patient is prepared to back the request with £10 out of hours instead of £5 normal hours. However, we find (in a practice which does all its own deputising) that 50% of telephone calls are for advice only, and that many patients requesting visits can be offered suitable advice instead. Whatever our terms of service say, I do not visit on demand but will readily do so if there is a medical indication. Usually I forget to have my night visit fee form signed by the patient because of my concentration on and interest in the patient's condition alone.

If the code approves only suitably ex-

perienced GPs for deputising (point 1), then it is inappropriate to force the doctor to make unnecessary visits purely on demand. I think this has wider implications and will only encourage patients to abuse a system that allows a visit for non-urgent conditions at any hour. It will undo the long-term careful education in out-of-hours self-medication that has been achieved in a practice such as ours.

J W BONE

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Hospital practitioner grade

SIR,—With reference to the letter from Dr A B Shrank (15 April, p 992) the position of women clinical assistants is indeed unenviable. I work in a large subnormality unit where seven out of a staff of 12 are women clinical assistants. All these women are ineligible for posts in the hospital practitioner grade because they work more than five sessions a week and are not in general practice. To expect them to work alongside a hospital practitioner who is to be paid at a higher rate and who may well be less qualified and have less experience in psychiatry than many of these women would seem to me to be, at the least, inequitable.

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Hospital day nurseries

SIR,—We heartily agree with the arguments expressed by Dr Sheila Hollins and her colleagues (15 April, p 991) about the need for the provision of crèche and nursery facilities for children of hospital employees. The same problem exists in many other institutions and in particular we are concerned at the lack of such facilities at almost all schools of the University of London. Among the members of the London School of Hygiene and Tropical Medicine are many employees and post-graduate students who need such facilities but who are unable to obtain places for their infants in the few hopelessly oversubscribed nurseries.

From the preliminary inquiries we have made in schools and colleges in the Bloomsbury area, there appears to be a great need for an expansion of the provision of crèche and nursery facilities for students and university employees. It may be justifiably argued that there is insufficient space for the nurseries within every institution and a solution might be to establish facilities for the central institutions on an intercollegiate basis. We are investigating the feasibility of such a scheme and would welcome the views of members of other institutions.

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BMA and the Abortion Act

SIR,—In reference to the Annual Report of Council (22 April, p 1065) and its support of the 1967 Abortion Act I would indicate that I