more detailed aspects of this matter, such as the financial benefit of a screening system to an employing authority. However, my main purpose is to draw attention to what I consider is a serious error in the thinking of the working party on collaboration and the Department of Health and Social Security which should be rectified.—I am, etc.,

T. A. I. REES

Plymouth

SIR,—The work environment and the assessment and control of general and specific hazards; the identification of people at risk because of their work disability and their ongoing supervision as they live and work; the critical scrutiny of sickness absence, identifying causative factors and advising both patients and others concerned with their work; helping the patient recovering from illness as he resumes work; the rehabilitation and retraining and work adaptation of the patient partially disabled by his illness—these are some of the down-to-earth problems which doctors and their patients face. Are we tackling such problems in the way we could?

General practitioners are often too busy to take this part of their patients' lives seriously, and are often ill-trained and too remote from working conditions to play an effective role. Industrial medical officers, where they exist, often lack sufficient knowledge of the employees committed to their care, being isolated from their general social and medical background, and have difficulty in liaising with N.H.S. colleagues. The Department of Employment's recent offspring, the Employment Medical Advisory Service, offers an opportunity to improve the industrial environment and develop its rehabilitation service further. But can it create a role for itself whereby doctors working within it are seen to be an integral part of industry, making a contribution to the vast problem of absence attributable to sickness, encouraging, educating, and advising on a continuing basis and thereby maintaining and improving the standards of safety with regard to occupational hazards? Furthermore, can any of these services play a part in not only preventing occupational disease and helping people to live with their diseases but in creating good working conditions?

When are we going to learn to shape up to the task of caring for our patients wherever they happen to be, with no prohibited or inhibited areas? This is what the real doctor wants to do as his part in a concerted integrated effort. I fear that recent reports and services being implemented are still nibbling at the problems. The nibbles are getting bigger, perhaps, but the orientation to each remains the same.—I am, etc.,

F. HEYES

Livingston,
West Lothian

Aetiology of Varicosity

SIR,—Mr. R. S. Lawson (9 September, p. 645) asked some specific questions which I will attempt to answer.

(1) "Has it been established that haemorrhoids and varicose veins occur together more often than the chance co-incidence of these two common conditions would provide for?"

I have been unable to find any evidence that the possibility of such a relationship has ever been investigated. I hope this will be done. Latta and Wilkinson (personal communication, 1971), recognizing a similar epidemiological association between varicose veins and diverticular disease, have recently investigated the association of these two diseases in individual patients and have shown a strongly positive relationship. Patients with diverticular disease appear to have approximately twice the frequency of varicose veins as do age- and sex-matched controls.

(2) "Can this theory explain why varicose veins are so much commoner in women?"

In the western world constipation, diverticular disease, and cancer of the colon are all commoner in women. If varicose veins were related to intestinal stasis this sex difference would be expected. In some developing countries where men adopt a western-type diet before women there is evidence that varicose veins, though rare, are commoner in men. With regard to aggravation in pregnancy, this can be only a supplementary factor since there is certainly no geographical relationship between the prevalence of pregnancy and that of varicose veins.

(3) "Can this account for the often quite irregular (and sometimes bizarre) distribution of varicose veins? It is not at all uncommon for them to be quite marked on one lower limb and not (or scarcely) in evidence at all on the other."

When two or more organs or structures are subjected to a common injurious environment they are seldom equally affected. Examples that can be cited are atherosclerotic gangrene of one limb, cancer of one lung, or tuberculosis of one kidney.

Mr. Lawson's suggestion that "hereditary influence is the most important of perhaps several factors responsible for varicose veins" is inconsistent with the situation in Africa and India, where the prevalence appears to be related not to ethnic background but to the extent to which western customs have been adopted. Only last month I was in Johannesburg, the largest city in sub-Saharan Africa, where the prevalence of varicose veins is steadily rising, and was later with a nomadic tribe in northern Kenya where the sole doctor for a population of over 200,000 cannot recall seeing more than three patients with varicose veins in 14 years.

If, as suggested by Mr. Lawson, angiomas are "second cousins" to varicose veins they might be expected to have a similar geographical distribution, whereas I am not aware of their being any less common in Africans than in Europeans. "To accept varicose veins as due to constipation" may seem "almost too credulous to Mr. Lawson," but I have still to find any alternative hypothesis which is consistent with indisputable epidemiological evidence.—I am, etc.,

DENIS P. BURKITT

London W.1

Acrylic Cement and Fat Embolism

SIR,—We believe that Professor J. Hume Adams and others (23 September, p. 740) have been hasty to implicate acrylic cement in the "genesis of permanent brain damage."

In a series of more than 70 arthroplasties of the hip using acrylic cement hypotension has always been transient.¹ This has been associated with a rise in the level of monomethylmethacrylate in the blood. Monomer rapidly disappears from the blood and its half life in vivo is only two minutes.

We presume that the total knee replacement in Mr. T. G. Sprunt's patient was performed under a tourniquet. In our experience of this operation hypotension never occurs at the time of insertion of the prosthesis. However, as in any such procedure the blood pressure falls when the tourniquet is released. Our patients have suffered no ill-effects from the transient hypotension. We believe that it is unjustifiable on present evidence to implicate acrylic cement per se as the cause of prolonged hypotension in Mr. Sprunt's patient.—We are, etc.,

PETER COLE
HUGH PHILLIPS
ALAN LETTIN
DAVID DANDY

St. Bartholomew's Hospital,
London E.C.1

¹ Phillips, H., Cole, P. V., and Lettin, A. W. F., *British Medical Journal*, 1971, 3, 460.

Confinement of Subnormal Offenders

SIR,—Over the past two years or so the word "normalization" has become more often heard in the discipline of mental sub-normality. As I understand it, it is meant to convey to the uninitiated that the patient's life should be made as comfortable as possible and as pleasant as possible, comparable to that in a good home. I am in favour of this trend, which I am sure is all for the better, and have recently on two occasions tried to advocate it. I am asked to see people (with a view to admitting them to my hospital) who have committed serious offences such as indecent assault, attempted rape, and grievous bodily harm—to mention but a few. Several that I have seen have been able to converse rationally with me as well as being able to understand that they have committed a serious offence.

Others, who are in the minority, have been in fairly regular employment, but because they have succumbed to various temptations, resulting in some of the offences as described above and are subnormal within the meaning of the Mental Health Act of 1959 are the subject of requests to be admitted to hospitals such as mine. As the current trend is rapidly towards open hospitals with an abhorrence of closed wards I cannot see what justification there is for admitting patients such as these into open hospitals. If we are encouraged to normalize the lives of these people my view is that if they commit offences as described they should pay the penalty through the operation of the law. I must emphasize that I make this statement with full regard to the view that they are high grade subnormals, in some instances with I.Q.'s of between 75% and 85%, and that in this context it seems to me that the question of their being subnormal is irrelevant.

I have discussed this matter with the psychologist and other senior medical staff at this hospital and we feel that with few exceptions, we are unable to effect a "cure" for such cases. Further, they will usually be admitted under Section 60 or 65 of the

Act, which means that to some extent they should be within a locked ward. I find that if we do not let them out on parole, even after two or three years in some cases, the staff that look after them occasionally accuse us of being too strict. If, on the other hand, and these cases are not uncommon, a patient behaves extremely well under supervision and we let him out on parole and he commits another serious offence we are held to be totally irresponsible.

I think there should be some form of establishment between a hospital such as this, which is, in the main, an open hospital, and a place like Rampton Hospital. At present, so far as I know and certainly so far as South Wales is concerned, there are no proper facilities of any sort to deal with these patients. I would be grateful for the comments of others on this problem. It is still my opinion that the public, to a large extent, do not understand the subnormal patient and are in many instances afraid of him.—I am, etc.,

D. C. JONES

Hensol Hospital,
Nr. Pontyclun,
Glamorgan

Prostaglandins and Glaucoma

SIR,—A substance capable of contracting the rat stomach strip has been found in greater quantities in aqueous humour from patients with open-angle glaucoma than in aqueous humour from patients with cataracts.¹ The activity seemed to be due to prostaglandin E₁. Prostaglandin E₁ has been noted to elevate intraocular pressure and induce an inflammatory response in animals.² Thus it was postulated that prostaglandin E₁ has a role in the causation of open-angle glaucoma.¹

We have measured prostaglandin E₁ in the aqueous humour of patients with and without primary open-angle glaucoma both at the time of cataract extraction and as acquired by paracentesis in a few out-patients. None of the patients had inflammatory disease. The radioimmunoassay³ utilized to measure concentrations of prostaglandins is specific for PGE and is readily applicable to the assay in aqueous humour. We have used this immunoassay to measure raised PGE concentrations in aqueous after application of PGE₁ to the monkey cornea. Because of the limited sample size (0.05 ml) prostaglandin E₁ levels lower than 200 pg/ml were not accurately measurable. In this small series no significant difference was noted between aqueous humour from glaucomatous and non-glaucomatous eyes with regard to levels of prostaglandin E₁. One control patient with uncomplicated senile cataract had a much higher result than all of the other patients.

Prostaglandin E₁ (ng/ml) in Human Aqueous

How obtained	Cases	
	Open-angle Glaucoma	Other
At operation	<0.20	0.39
	<0.20	0.41
	<0.20	0.46
		2.56
By paracentesis		<0.20
	0.44	0.45
		<0.20

The discrepancy between our preliminary results and those previously reported would

indicate that further experience is necessary of measuring each of the prostaglandins in specimens of human aqueous humour by specific assay before any conclusions should be drawn about the aetiology of open-angle glaucoma.—We are, etc.,

STEVEN M. PODOS
BERNARD M. JAFFE
BERNARD BECKER

Washington University,
St. Louis, Missouri, U.S.A.

- 1 Wyllie, A. M., and Wyllie, J. H., *British Medical Journal*, 1971, 3, 615.
- 2 Beitch, B. R. and Eakins, K. E. *British Journal of Pharmacology*, 1969, 37, 158.
- 3 Jaffe, B. M., Smith, J. W., Newton, W. T., and Parker, C. W., *Science*, 1971, 171, 494.

Vasectomy in the Surgery

SIR,—I note there is some interest at the moment in general practitioners undertaking vasectomies under local anaesthetic in their surgeries. I also considered this, but thought I should first carry out a number of vasectomies under general anaesthetic with consultant supervision. After some 30 vasectomies I found this method anything but easy. The vas is extremely mobile, is often difficult to locate, and once located and pinned between three fingers can easily slip and become lost. It is often difficult to isolate among the layers of tunica vaginalis and on several occasions I mistook this for the true vas. Even when the vas had been isolated, secured, and a piece removed tying the two ends can be quite complicated. The stitch can slip unless one is fairly adept at this, and the end of the vas, especially the distal end, can disappear from view and, indeed, be very difficult to recover.

None of the vasectomies which I have observed carried out under local anaesthetic have been completely painless, and, in my opinion, the fairest method for the patient is that the operation should be carried out under a general anaesthetic. I do not feel that it is a procedure ideally suited for general practice.—I am, etc.,

E. RONALD SEILER

Edinburgh

Anaesthesia by Acupuncture

SIR,—Dr. M. A. E. Ramsay (16 September, p. 703) raises the points about the basic problems of an open chest and collapsed lung during acupuncture anaesthesia, and asks for more details.

During our visit to China I was present at two lobectomies. At Cheng Hwa Hospital, Shanghai, on 17 March we watched a tuberculous area of a lung (not fully cured after two years of medical treatment) being removed under acupuncture by one needle in the deltoid region vibrated manually. At Nanking General Hospital, on 1 April, we watched the removal of the right lower lobe from a woman aged 30 years, a mother of three children, suffering from bronchiectasis. In this case anaesthesia had been attained by using five needles—two in the right forearm, two in the front of the chest, and one in the back. These were vibrated with a small electric current.

The operation had started at 9 a.m. I arrived at 10.15 a.m. I noted that the patient's general condition was good, that she was having a small blood transfusion,

that her blood pressure was being charted regularly and remained steady at 110/80, and her pulse 64, normal, and regular. The right side of the chest had been opened and the right lung was completely collapsed (she was lying, of course, on her left side). The fully conscious patient was breathing chiefly with her abdominal muscles and diaphragm, having been taught to do so during the week before the operation. One of our group, Dr. Kathleen Rutherford, was sitting with her talking to her about her family with the help of an interpreter, and from time to time Dr. Mary Hollington gave her water to drink. Unfortunately, there were many adhesions between the bronchus and main blood vessels so the operation was long and tedious, but there was very little bleeding indeed. I left after about an hour. The patient was still in good condition though she had admitted a little discomfort when the mediastinum was pulled by the surgeon. (During the operation the main lights of the theatre failed for 3 minutes, but the operation continued with the use of torches).

The above description is written from notes made in the theatre at the time. I might add that I have been in general practice for over 25 years so cannot speak with authority on anaesthesia or surgery. I write what I saw, and I was astonished.—I am, etc.,

S. G. HAMILTON

British High Commission Hospital,
New Delhi, India

SIR,—I would like to try to reply to the letter of Dr. M. A. E. Ramsay (16 September, p. 703) concerning thoracic operations under acupuncture anaesthesia. In the two operations of this nature that we witnessed in Shanghai and Nanking the patient was fully conscious throughout the procedure. We were able to converse with the patients while the operations were being performed and they did not seem to be unduly distressed when the chest was opened. There was some discomfort when traction was applied to the bronchus but none during incision. No form of assisted ventilation was used so it would appear that acupuncture anaesthesia has overcome the basic problem of the open chest and collapsed lung. Before operation the patients are instructed for several weeks in correct breathing so that they will not be distressed when the lung is collapsed. I would like to pay tribute to the courtesy of the Chinese surgeons who answered all our questions and allowed us to photograph the operations.—I am, etc.,

P. E. PEARCE

Christchurch, Hants

SIR,—In reply to Dr. M. A. E. Ramsay's question (16 September, p. 703) concerning acupuncture anaesthesia and the open chest with its concomitant problem may I add the following comments to help clarify the point.

Patients for acupuncture anaesthesia are carefully selected and there is a 20% failure of likely candidates. The selected cases are given a week of intensive physiotherapy prior to the operation to enable them to have some breathing control. Before the pleura is entered, 4% amethocaine is applied to its surface and at the same time pethidine is being run into the circulation by an intra-