answerable question at the moment and remains a challenge for future research.—We are, etc.,

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- 1 Demling, L., Ottenjann, R., and Gebhardt, H., *Gastroenterologia*, 1964, 102, 129.
- 2 Wünsch, E., et al., *Chemische Berichte*, 1972, 105, 2515.

Myocardial Infarction and Metabolism

SIR,—In your leading article "Metabolism and Infarction" (14 September 1974, p. 643) you indicated that the extent of ischaemic damage could be altered by metabolic manoeuvres, including lowering the circulating free fatty acid concentrations, and you were kind enough to refer to the work of my group, which has now been published in preliminary form.¹ However, your article suggested that metabolic manipulation may be effective only in the first hour or two after the onset of symptoms. But experimental myocardial infarction in the dog takes a week for the full extent of necrosis to be manifest.² The experiments of Maroko *et al.*³ on dogs showed that glucose, insulin, and potassium therapy could reduce infarct size even when started three hours after coronary artery ligation, and in man Shell and Sobel⁴ have shown reduction in infarct size by reduction of after-load in hypertensive patients seven hours after the onset of rise of blood creatine phosphokinase—that is, probably about 12 hours from the onset of symptoms. Judged by decreased precordial ST-segment elevation, decreased ischaemic damage in man can be achieved up to 72 hours after the onset of symptoms, as shown by Shillingford's group.⁵ Conversely, experimental infarcts can be aggravated up to 72 hours after coronary artery occlusion by isoprenaline infusion.⁶

It would therefore seem that metabolic manipulation may well play a role even if started hours after the onset of symptoms, and every effort should be made to encourage the testing of the effect of reduction of circulating free fatty acids and/or promotion of glucose metabolism; glucose, insulin, and potassium therapy should do both. An effect of this treatment on infarct size in man has not been found, nor has it been looked for. To assess infarct size in man is not easy. Some of the principles and problems in relation to the possible use of glucose, insulin, and potassium are outlined elsewhere.⁷ Other metabolic possibilities include the use of dichloroacetate to help influx of pyruvate into the citrate cycle,⁸ as suggested in your leading article.

Finally, it should be noted that it is increased cyclic AMP, and not AIMP as stated in your article, which has been found in the blood of patients with acute myocardial infarction.^{10,11} The cyclic AMP change may reflect increased catecholamine activity, which can also be monitored by plasma glycerol changes.¹²

The Chris Barnard Fund and the Medical Research Council of South Africa are thanked for support.—I am, etc.,

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- 1 de Leiris, J., Lubbe, W. F., and Opie, L. H., *Nature*, 1975, 253, 746.
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- 5 Pelides, L. J., et al., *Cardiovascular Research*, 1972, 6, 295.
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- 11 Rabinowitz, B., Kligerman, M., and Parmley, W. W., *American Journal of Cardiology*, 1974, 34, 7.
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Abortion (Amendment) Bill

SIR,—Your leading article (17 May, p. 352) and the subsequent statement given on radio by the Secretary of the Association in reference to the sit-in at B.M.A. House would suggest that the Abortion (Amendment) Bill is entirely evil and contrary to the highest standards of medical practice. The report of the Lane Committee is cited in support and you would have us believe that basically all is well with the present position. All is not well, and it is exactly because it is not that the Abortion (Amendment) Bill was introduced.

The 3243 terminations of pregnancy last year in girls under the age of 16 years should not be seen as an isolated phenomenon and unconnected with the present attitude to regard abortion as a form of contraception. We are told there is another answer to that too, which is to prescribe the pill to even younger age groups so that the whole country will be eventually "protected." Yet in spite of an already considerable extension of contraception for youngsters, the abortion figures in this group continue to rise.

You object to the introduction of adjectives such as "grave" and "serious," yet these have been used in medical practice for many years and have a greater reliability of interpretation than most others. The Bill introduced by James White was intended to make doctors face up again to their responsibilities and it is sad, though in this age not too surprising, to see a distinguished journal plead that doctors should not be asked to behave responsibly.

When one considers that upwards of 90% of the 150 000 legal abortions are done on psychiatric grounds when all the evidence shows that no "grave" or "serious" psychiatric threat to the mother's health exists it is not protection that the doctors require from its leading journal but exposure. And what of those doctors who, rightly, will not abort unless the threat to the mother is "grave" or "serious"? Are you suggesting that they are less worthy medical practitioners than the abortionists?

This medical stable is filthy and if we do not clean it out ourselves we cannot complain if others will do the job for us. There

are still, fortunately, many doctors in this country who support the James White Bill and it is largely under pressure from many of my colleagues who share my views that I have written this letter.—I am, etc.,

MYRE SIM

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World Federation of Doctors who Respect
Human Life (British Section)

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SIR,—I am very weary of reading letters in the *B.M.J.* on sanctity and the "right of conscience" to abstain from giving medical help in abortion. How refreshing it would be to read some of real Christian concern and compassion for the woman in distress with an unwanted pregnancy and of some medical sense of responsibility in preserving her from the results of "back-street" abortion.

The fetus in the great majority of unwanted pregnancies will die anyhow. It may be by a knitting needle, a crochet hook, slippery elm-bark, or drowning in the W.C. Or if it survives so far, being overlain or let die. But it will die. It is time this nonsense of writing and talking as if abortion was caused by the Abortion Act, came to an end. It is rubbish. Abortions occur. All doctors can do, and certainly have an obligation as doctors to do, is to try to ensure medical care for the woman where they can. And it is for this that the Act provides. Has a woman no right to compassion and medical care in unwanted pregnancy?

What Mr. White's Bill will do is to deprive the majority of women of medical aid in abortion and the conscientious doctor of his "right of conscience" to secure this for his patient, on pain of legal persecution. It will even be a crime for him to discuss her intentions with her. This is outrageous. And, had it not been for the way these aspects of Mr. White's Bill were glossed over to those who voted for it and the Bill slipped through quickly under its acceptable outer cover, it would have been flung out, as it should have been and should be now, as an affront to any humane society.—I am, etc.,

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Psychiatry in Russia

SIR,—We recently had the opportunity to meet and confer with Dr. Marina Voikhan-skaya, a Russian psychiatrist just arrived from Leningrad. Her testimony removed any vestige of doubt that Soviet psychiatrists certifying dissidents and human rights workers for compulsory detention know full well that there are no clinical grounds for detaining these "patients," who are wrongfully certified for reasons of political convenience. Psychiatrists in charge of dissidents in "special" and ordinary psychiatric hospitals are also cognisant of these facts and do not merely construe the concept of mental illness differently from their colleagues in the West. Hearing Dr. Voikhan-skaya's evidence has convinced us that allegations of bad faith and misuse of psychiatry in the Soviet Union are all too well founded. She has asked us to submit

for publication the following open letter to British psychiatrists:

Dear Fellow Psychiatrists,

I understand that it was your intervention that helped me so quickly (and comparatively painlessly) to leave the U.S.S.R., where the right to hold one's own beliefs is being constantly violated.

Life in the Soviet Union has taught me that the authorities in my country are extremely sensitive to the public opinion of the Western powers. I saw that help was especially effective where Western colleagues had interfered resolutely and uncompromisingly. That is why, on behalf of my colleagues in the Soviet Union, who have no possibility of expressing their opinions openly, I ask you to help those who have tried to defend the honour of psychiatry—Vladimir Bukovsky and Dr. Semyon Gluzman. By defending these honest and brave people you are also defending the integrity of our profession.

Whatever decision you choose to take, please keep in mind that while you are able to think and speak freely many sane people are forcibly detained in prison hospitals—with the connivance of our profession.

(Signed) Dr. Marina Voikhanskaya

—We are, etc.,

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Indomethacin, Prostaglandins, and Dysmenorrhoea

SIR,—The Danish general practitioner Dr. A. Christensen, whose serendipitous discovery of the beneficial effect of indomethacin in dysmenorrhoea is mentioned in your recent leading article (31 May, p. 461), perhaps reads *Nature* no more regularly than I read *Ugeskrift for Læger*. An article in the former journal¹ in 1972 stated: "One of the anti-inflammatory drugs could possibly prove of value in dysmenorrhoea, which may be associated with abnormal prostaglandin action; especially as aspirin has commonly been recommended for its simple treatment." The fact that anovulatory cycles (normally pain-free) in one young subject ended with menstrual losses having only one-fifth the usual content of prostaglandin-like material was reported briefly in 1967,² and a little evidence on the prostaglandin content of menstrual fluid from normal and dysmenorrhoeic subjects was given as long ago as 1965.³ Recently, as your article implies, these questions have been further investigated by more powerful methods and with better understanding of prostaglandin metabolism. The work of the Stockholm group is particularly notable. For example, Lundström *et al.*⁴ have recently found that the concentration of the prostaglandin metabolite 15-keto-13,14-dihydroprostaglandin $F_{2\alpha}$ in plasma is high in dysmenorrhoeics and is lowered by indomethacin treatment.—I am, etc.,

V. R. PICKLES

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¹ Pickles, V. R., *Nature*, 1972, 239, 33.

² Pickles, V. R., *International Journal of Fertility*, 1967, 12, 335.

³ Pickles, V. R., *et al.*, *Journal of Obstetrics and Gynaecology of the British Commonwealth*, 1965, 72, 185.

⁴ Lundström, V., Wiqvist, N., and Green, K., *International Conference on Prostaglandins*, Florence, May 1975. Abstracts, p. 222.

SIR,—It seems from your leading article on dysmenorrhoea (31 May, p. 461) that you are more familiar with the correspondence columns of Danish journals than with those of your own.

In 1973,¹ several months before Dr. Christensen's letter, you published a letter from me stating that for several years I had successfully treated most cases of dysmenorrhoea with indomethacin, usually in a dose of 25 mg four times daily. I had in fact mentioned this on more than one occasion to the representatives of the makers but without apparent interest on the firm's part. Subsequently in a letter² Professor V. R. Pickles suggested the possible role of prostaglandins in dysmenorrhoea and drew attention to his suggestion in 1972³ that non-steroidal anti-inflammatory drugs might be of value.—I am, etc.,

G. G. HILL

Hemel Hempstead,
Herts

¹ Hill, G. G., *British Medical Journal*, 1973, 3, 106.

² Pickles, V. R., *British Medical Journal*, 1973, 3, 349.

³ Pickles, V. R., *Nature*, 1972, 239, 33.

SIR,—For a number of years I have been prescribing phenylbutazone for patients with dysmenorrhoea and the results have been very satisfactory. The treatment is started the day before the onset of the period, if this can be calculated, or when the period starts and continues for 24-72 hours as necessary; side effects have been minimal.

Reports on the value of phenylbutazone in dysmenorrhoea first appeared over 20 years ago.¹ By a similar piece of serendipity to that used by Christensen² when he found that indomethacin prescribed for other reasons also relieved dysmenorrhoea (leading article, 31 May, p. 461) Fox—and later others³⁻⁵ found the identical happy result with phenylbutazone when they used it for rheumatic conditions. My memory is that it was the paper by MacQueen⁶ which led me to adopt this treatment.

If any credit is to be given for the earliest uses of prostaglandin synthetase inhibitors in dysmenorrhoea, it should surely go to those who discovered the value of phenylbutazone.—I am, etc.,

STUART CARNE

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¹ Fox, W. W., *Lancet*, 1953, 1, 195.

² Christensen, A., *Ugeskrift for Læger*, 1974, 136, 592.

³ Strazza, J. A., and Ressetar, M., *Journal of the Medical Society of New Jersey*, 1953, 50, 333.

⁴ Arden, G. P., *Rheumatism*, 1954, 10, 44.

⁵ Black, E., *Canadian Medical Association Journal*, 1958, 79, 752.

⁶ MacQueen, R. L., *Practitioner*, 1960, 184, 787.

Hormonal Pregnancy Tests and Congenital Malformations

SIR,—In 1967, before drawing attention to the teratological effect of the hormonal pregnancy test¹ I consulted the then Committee on Safety of Drugs. Though the committee found that my observation obviously had clinical importance a formal warning was not issued because other data were not available on the topic at that time. This precaution was taken to prevent alarming the public. In 1969, however, the manufacturers were advised by the committee to discourage the promotion of the hormonal

pregnancy test tablets and consequently manufacturers in Great Britain no longer recommend their products for testing pregnancy and have changed the indications for such preparations as Primodos, Amenorone-Forde, and Orasecron. These measures appear to be sufficient to safeguard the manufacturers, but they are less satisfactory from the public point of view as most of these preparations are available and recommended for the treatment of secondary amenorrhoea.

Following the publication of the detailed findings which indicated the teratogenic hazard of the pregnancy test² the problem has gained wide interest, and I am pleased that your recent leading article (30 November 1974, p. 485) and Dr. Gillian Greenberg and her colleagues (26 April, p. 191) have reiterated my view that "unnecessary risks are being taken by diagnosing pregnancy with an in vivo method when many other reliable in vitro methods are available."² Still, it is clear that some general practitioners have continued to use the tablets for pregnancy testing, probably because the changes introduced by the manufacturers were rather inconspicuous.

The warning notice which has now been issued by the Committee on Safety of Medicines (14 June, p. 625) is therefore to be welcomed. It would seem appropriate, however, to reinforce this warning by further measures such as: (1) changing the name of products which were formerly recommended for pregnancy testing and which are at present indicated for the treatment of secondary amenorrhoea not due to pregnancy; and (2) continuing to remind the medical profession of the unnecessary risks of using the tablets either for diagnostic or for abortifacient purposes.—I am, etc.,

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¹ Gal, I., Kirman, B., and Stern, I., *Nature*, 1967, 216, 83.

² Gal, I., *Nature*, 1972, 240, 241.

Safer Cigarettes

SIR,—In your leading article (17 May, p. 354) it was pointed out that anti-smoking campaigns had failed and that attention was now being turned to "safer cigarettes." Addiction is suggested as the reason for failure of the former. If this is so no substance with an absent or reduced nicotine content would be an acceptable substitute.

In 1963 I suggested¹ that "any means to reduce the temperature of combustion of cigarettes without lowering palatability would be advantageous to health because burning tobacco at a temperature significantly under 700°C should be successful as heterocyclic carcinogens were produced at combustion temperatures of 700°-900°C when burning skin, yeast, etc."² Pipe and cigar smokers are less subject to lung cancer than cigarette smokers—I believe both because of the lower temperature of combustion of these materials (550-700°C)⁴ and because pipe tobacco is left to "cure" at ambient temperatures. It is also possible to use a coarser flake with pipe tobacco, producing a different ratio of air to tobacco in the smoke, which is probably significant. Beffinger (personal communication) has pointed out that since 1900 most cigarette