of hurting and harming the public in a way that a doctor is not. Nobody has to co-operate in producing these programmes, and clearly the sort of assurances Jennett and his colleagues received from the BBC prove that the media do not share our oath: *primum non nocere* (first of all do no harm).

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¹ *The removal of cadaveric organs for transplantation: a code of practice*. London: HMSO, 1979.

² Jennett B. *Lancet* 1980;ii:910-1.

SIR,—The leading article (18 October, p 1028) and the article in *Medicine* and the *Media* (p 1064) accusing the BBC programme *Panorama* of sensationalism have themselves fallen into the same bias. Calling it a "dis-grace" and a "hammer film" and putting future deaths due to lack of donors on the BBC's "conscience" do not promote serious thinking. Neither do cynical and condescending statements on, for instance, medical practice behind the Iron Curtain contribute to the objectiveness of the argument.

The problem is complex and is by no means intended to be discussed here again. It is a fact, however, that the subject of brain death raises a certain uneasiness in doctors and population alike, which is partly responsible for the lack of transplantable organs.¹ It should be our aim to dissipate this uncertainty rather than to indulge in sometimes trivial discussions and irrelevant accusations.

A controlled study is needed to establish the reliability of the present practice.^{2,3} Only then will the concerned population believe that the dismissal of the EEG is really a "pioneering" deed and not due to lack of equipment (which is also an undeniable fact). For ethical reasons such a study could be carried out on patients whose relatives refused to consent to organ donation. From the basis of such a study one could reconsider whether or not a repeated diagnosis should be compulsory, whether a neurologist should be called to see the case, whether methods of excluding effects of (possibly unknown) medication ought to be found, etc.⁴

Whereas it could be considered as part of the BBC's duty to stir up an argument where there are open questions, it is our task to provide the answers with information based on solid research and experience.

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¹ British Transplantation Society. *Br Med J* 1975;i:251-5.

² *The removal of cadaveric organs for transplantation: a code of practice*. London: HMSO, 1979.

³ Conference of Medical Royal Colleges. *Br Med J* 1976;ii:1187-8.

⁴ Searle J, Collins C. *Lancet* 1980;ii:641.

SIR,—I have read with interest the responses in the medical press to the *Panorama* programme of 13 October 1980. As a layman with some understanding of the technicalities I appreciate the effect which such a broadcast may have had on the transplant programme.

Unfortunately the debate does not appear to have clarified an important point. Towards the end of the programme Professor Jennett was asked whether a long-term follow-up study to analyse the survival rate of "brain dead" patients had been carried out in Britain

in order to assess the validity of the brain death criteria. Since Professor Jennett appeared to reply to this with a firm "no" surely the would-be donor with an eye for probabilities may be expected to think again?

I hope to be told that Professor Jennett was misquoted or misinformed rather than that no scientific analysis of the validity of the criteria was made before putting them into practice.

G KENWORTHY

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SIR,—Two nights ago I happened to visit a young student relative. He assured me that he and all of his friends who had held donor cards ostentatiously tore them up as a result of the BBC programme. Whatever the bias, they thought, the law would not have allowed the main message to be put over unless it were true—that is, that without an EEG you cannot guarantee that death has occurred, and in Britain an EEG is not obligatory. As the correspondence in the *BMJ* (25 October, p 1139) shows, a flat EEG is no absolute guarantee of death and the criteria for death laid down in Britain are far superior to the indeterminate standards prevailing in the USA, where the BBC found its "evidence." None of the cases exemplified in the programme would have passed the average hospital registrar here.

What is to be done now? Many lives are to be lost through lack of donors. This is not a probability; it is certain. Our actions must take two forms, immediate and political:

(1) We must insist on one half-hour presentation made entirely by three experts in the field, but also chosen for their television personality (even the television lighting can discredit sincerity). Questioning must be allowed, but by MPs, doctors, would-be donors themselves, and a churchman (the Rev John Tait, who would do his homework and ask penetrating questions). The programme must be recorded and repeated weekly for a month or two. A few potential donors might then take out cards again.

(2) The question of future policy is another matter. The conditions laid down by Dr Stephen Lock (25 October, p 1137) are far too fragile. Seventeen years ago when the Committee on Safety of Medicines was first set up, I was sent on a training course in case I should be interviewed by television. The four of us on the course took part in a mock debate on a specified subject. Every time we seemed to be getting somewhere, the interviewer jerked us away from any sort of agreement. Eventually I lost patience and asked: Are you interested in a sensible discussion or not? The reply was, "Good Lord no, my dear fellow, that would be frightfully bad television."

Milton Shulman's *Ravenous Eye*, published several years ago, is a convincing scientific study of the adverse effects of television on family life and, indeed, on democracy itself. Even Robin Day's *Day by Day* got as near as possible to dog biting dog in warning us what television was doing, and his recent article in the *Daily Telegraph* was even more definite. There have been other good publications. Unfortunately MPs I have spoken to have not looked at the evidence or are so keen on getting on to telly themselves that they will grovel at any television interviewer's feet.

Let doctors in future never appear on

television unless on a programme designed and edited by doctors. Let the written press tear us to bits as much as they like the next day. If we are not "good television" so be it. But let us think of our patients, or at least our dignity. Television is positively committed to promoting controversy and destroying harmony.

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SIR,—I am appalled by the callous indifference of the *Panorama* television programme (BBC1, 13 October) on brain death, but we must not delude ourselves that the public readily accepts the arrangements for removing donor organs. Brain death is a sensible, convenient concept and safe in competent hands, as is also the view that brain death is death. However, many intelligent lay people seem to have suspicions. Would it not now be wise for the decisions of the Royal Colleges to be passed to a competent lay authority for examination and endorsement?

Death is the concern of all of us, not only of doctors.

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Millions of mild hypertensives

SIR,—I refer to your leading article (18 October, p 1024), and the first of a series of articles by Dr Liam Bannan and others (4 October, p 923) who outline the initial steps to be taken in the treatment of hypertension. They refer to non-drug management and other risk factors. In relation to diet they advise reduction in weight for the obese and in salt for all.

The facts would seem to be that most heart attacks and strokes occur in those with mild to moderate hypertension and are not due to the direct effects of elevated blood pressure on small vessels, but to accelerated atherosclerosis. There is abundant epidemiological and experimental evidence that hypertension per se does not cause atheroma and in the presence of a non-atherogenic diet, which perhaps can be defined as one not associated with hyperlipoproteinaemia, as in Japan and tropical countries, coronary heart disease and atheromatous stroke are rare in hypertensive patients, as in the population in general. The same comment applies to diabetics in these countries. It surely follows that in hypertensives there should be particular emphasis on what is now widely accepted as a more prudent diet on the lines, for example, recommended for whole populations by Professor Barry Lewis in a recent article (19 July, p 177) with the target of achieving optimal plasma low-density lipoprotein-cholesterol concentrations. The same diet will improve the fatty acid composition of adipose tissue and hence important cells and tissues related to atherosclerosis and platelet function.

Lewis's paper was based on the data assembled for one section, of which he was chairman, of a very important conference held in New York last year on diet in relation to optimal blood lipids. The published proceedings bring the story up to date.¹ It is hard to believe that anyone who studies the massive data from epidemiology, clinical, laboratory, and pathological work, and experimental studies could fail to be convinced of what needs to be done about preventing atheromatous disease.

It is important that plasma low-density lipoprotein and, ideally, high-density lipoprotein-cholesterol concentrations should be measured in all hypertensives in order that progress can be measured, because the risks of combined hypertension and hyperlipidaemia are so great. The dietary recommendations, however, are for whole populations and are in effect of a prophylactic nature against the commonest complications of hypertension.

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¹ Lewis B. *Prev Med* 1979;8:679-714.

SIR,—I am in broad agreement with your conclusions regarding the level of blood pressure which demands consideration of anti-hypertensive treatment (leading article, 18 October, p 1024)—with one essential proviso: namely, that the diastolic pressures you quote are clearly recognised as being fifth phase levels. The great majority of the doctors who read your comments were trained to record the diastolic pressure at the fourth phase—the point of muffling of the sounds. On the other hand, the trials of antihypertensive treatment which you quote use the fifth phase—the point of disappearance. There is a great difference between the two—something approaching 10 mm Hg¹: enough to affect something approaching a million individuals in Britain alone. So when you urge detection and treatment of all patients with a diastolic pressure of 100 mm Hg or more it must be recognised that this is equivalent to a fourth phase pressure of 105-110 mm Hg.

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¹ D'Souza MF, Irwig LM. *Br Med J* 1967;iii:814-5.

New drugs for peptic ulcer

SIR,—Your leading article on new drugs for peptic ulcer (12 July, p 94), while offering a fairly comprehensive and critical review of most of the newly developed drugs for peptic ulcer, does scant justice to sucralfate, a safe and effective ulcer-healing agent that compares favourably with cimetidine in the treatment of peptic ulcers.

Apart from its anti-peptic effect, sucralfate forms an adherent chemical complex with proteins at the ulcer site¹ and this has been shown to have a protective barrier effect against pepsin, acid, and bile.² Available evidence points to the cytoprotective effect of sucralfate as being more important than its anti-peptic activity in ulcer healing.

Sucralfate has been shown to be significantly better than placebo with regard to ulcer healing in two peptic ulcer trials with 213 patients,^{3,4} in three duodenal ulcer trials with 398 patients,^{5,6} and in one gastric ulcer trial with 40 patients.⁶ Statistical significance was not attained in an earlier gastric ulcer trial, the lone study of 31 patients cited in your leading article.⁷ Even this trial, however, showed sucralfate to be significantly better than placebo with regard to diminution in ulcer size.⁶ In this connection, it should be noted that there is now some uncertainty about the unequivocal value of cimetidine in gastric ulcer healing; earlier trials showed cimetidine to be significantly better than

placebo, but this could not be confirmed in two subsequent studies.⁶

Comparative studies with cimetidine involving a total of 172 patients lend further support to the value of sucralfate in ulcer therapy. We⁸ noted duodenal ulcer healing in 83% of the sucralfate-treated and in 71% of the cimetidine-treated patients after six weeks' therapy, and healing rates of 63% and 75% respectively were achieved in gastric ulcer patients after a similar period. F Martin *et al*, in a four-week duodenal ulcer study (to be published), found duodenal ulcer healing in 80% of the sucralfate-treated and in 70% of the cimetidine-treated patients.

Sucralfate has been the market leader in ulcer therapy in Japan for the past decade, and has been widely used in many Western countries for the past two years. It has an impressive safety record, is relatively inexpensive, and offers an important alternative, or indeed adjunct,⁹ to the acid-inhibitory preparations currently in use in the treatment of peptic ulcers.

No fewer than 23 of the 32 references in your leading article are to papers or abstracts published in the past 18 months, but it would seem that none of these refer either to the mode of action or to the efficacy of sucralfate in ulcer healing. This oversight, coupled with the understandable presumption that sucralfate is little more than a pepsin antagonist, has undoubtedly led to your questionable verdict on its efficacy in ulcer healing. We hope that our letter will correct this erroneous impression.

I N MARKS

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¹ Nagashima R, Hinohara Y, Hirano T. *Arzneim Forsch* 1980;30:88.

² Bighley LD, Giesing D. *Peptic ulcer disease—an update*. New York: Biomedical Publications, 1979.

³ Ishimori A. *Hepato-gastroenterol Suppl Abstr XI Int Congr Gastroenterol* 1980;H9:384.

⁴ Elliot C, Orchard R. *Hepato-gastroenterol Suppl Abstr XI Int Congr Gastroenterol* 1980;H9:384.

⁵ Moshal MG, Spitaels JM, Khan F. *S Afr Med J* 1980;57:742-4.

⁶ Marks IN. *Drugs* 1980; October (in press).

⁷ Mayberry JF, Williams RA, Rhodes J, Lawrie BW. *Br J Clin Pract* 1978;32:291-3.

⁸ Marks IN, Wright JP, Denyer M, Garisch JAM, Lucke W. *S Afr Med J* 1980;57:567-73.

⁹ Marks IN. In: Truelove, Willoughby, eds. *Topics in gastroenterology* 7. Oxford: Blackwell, 1979: 125-6.

SIR,—In a recent leading article (12 July, p 95) on new drugs for peptic ulcer, sucralfate is grouped with pepsin antagonists and reference is made to its failure to show significant benefit in gastric ulcer. The action of this drug is a little unusual, for its anti-pepsin properties are relatively weak, but it forms an adherent protective layer on gastric mucosa, particularly

at sites of ulceration,^{1,2} and this layer limits the back diffusion of hydrogen ion.

Although the results of the Cardiff trial³ just failed to show a statistically significant benefit in gastric ulcer, subsequent work in both gastric and duodenal ulcer has shown a significant effect on healing compared with placebo⁴ and results similar to cimetidine in comparative trials⁵ (further work was also reported by B Fixa *et al* and by F Martin at the 11th international symposium on gastroenterology in June). A recent study extending over 18 months has also shown a reduction in recurrence of gastric ulcer.⁷

The current clinical data (see accompanying table) would suggest that sucralfate is of value in peptic ulcer and of particular interest because it acts topically and is virtually unabsorbed by the gastrointestinal tract.

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¹ Nagashima R, Hinohara Y, Hirano T, Tohira Y, Kamiyama H. *Arzneim Forsch* 1980;30:80.

² Nagashima R, Hinohara Y, Hirano T. *Arzneim Forsch* 1980;30:84.

³ Mayberry JF, Williams RA, Rhodes J, Lawrie BW. *Br J Clin Pract* 1978;32:291-3.

⁴ Moshal MG, Spitaels JM, Kahn F. Sucralfate in the treatment of duodenal ulcers. *SA Med J* 1980;57: 742-4.

⁵ Marks IN, Wright JP, Denyer M, Garisch JAM, Lucke W. *SA Med J* 1980;57:567-73.

⁶ Miyake T, Ariyoshi J, Takeshi S, Oishi M, Sakai M, Ueda S. *Am J Dig Dis* 1980;25:1-7.

Sterilisation of mentally retarded minors

SIR,—I read the leading article on "sterilisation of mentally retarded minors" (18 October, p 1025). Sterilisation is "in large measure an irreversible procedure" as you mentioned. One has to be extremely careful to order such an operation for any woman, particularly for a person who is not only a minor but mentally handicapped as well. In my experience the need for such a procedure is minimal. I have no doubt that even if the law becomes more permissive with regard to the sterilisation of mentally handicapped minors the number of girls put forward for sterilisation will not increase dramatically. One only has to look at the number of adult mentally handicapped women who undergo sterilisation—it is a small number.

The number of unwanted pregnancies is not very high in the severely mentally handicapped. In spite of biological fertility most of them do not have effective fertility. In some cases biological fertility is nil or doubtful as well. It is true that existing methods of contraception are unsatisfactory, more so for the mentally handicapped, but, whenever there is a need for contraception, the majority of the mentally handicapped manage well with the advice and help of a psychiatrist and an understanding gynaecologist. We have to

Results of clinical trials with sucralfate for healing peptic ulcer

Authors	Type of ulcer	No (%) of ulcers healed		Time (weeks) to healing
		With sucralfate	With placebo	
*Mayberry <i>et al</i> ³	Gastric	8/16 (50)	2/15 (13)	4
Fixa <i>et al</i> ⁴	Gastric	17/24 (70.8)	8/20 (40)	4
Moshal <i>et al</i> ⁴	Duodenal	24/30 (60)	15/29 (24)	6
		With sucralfate	With cimetidine	
Marks <i>et al</i> ⁵	Gastric	17/27 (63)	21/28 (75)	6
	Duodenal	24/29 (83)	20/28 (71)	
Martin [†]	Duodenal	14/19 (73.6)	16/22 (72.7)	4

*Numbers include three patients withdrawn because of deterioration in symptoms.

†Report presented to 11th international symposium on gastroenterology, June 1980.