- All letters must be typed with double spacing and signed by all authors.
- No letter should be more than 400 words.
- For letters on scientific subjects we normally reserve our correspondence columns for those relating to issues discussed recently (within six weeks) in the *BMJ*.
- We do not routinely acknowledge letters. Please send a stamped addressed envelope if you would like an acknowledgment.
- Because we receive many more letters than we can publish we may shorten those we do print, particularly when we receive several on the same subject.

Sex and the mentally handicapped

SIR,—Ms Clare Dyer's article on the sterilisation of mentally handicapped adults¹ makes for worrying reading.

If a patient is too handicapped to give valid consent to a sterilisation operation on what grounds do we presume to judge that she is, nevertheless, able to consent to the sexual relationship she is currently having with a fellow patient? Such relationships with girls under 16 are considered unlawful because the girls are deemed to be incapable of consenting to the sexual act. If the mentally handicapped woman F has a mental age of "4 or 5" how can she possibly be giving valid consent?

The fact that her partner is similarly handicapped and thus not liable to be imputed with guilt does not affect this consideration. If a demented person attacks another like himself we say he cannot be found guilty because of diminished responsibility. We do not say his condition means that in effect the attack was not a crime, neither do we say that he should be allowed to do the same thing again.

There are risks apart from pregnancy for unconsenting adults in sexual encounters, not the least of them being venereal disease and AIDS. Sterilisation will do nothing to protect F from these dangers. Indeed, it is almost as if, once the possibility of pregnancy is discounted (which would affect F far less than her carers), concern for her health and welfare is extremely scant.

The care of mentally handicapped people in an open environment is a challenge to doctors, health care workers, and the community. It is not best served by subjecting mentally handicapped women to operations that serve only to cover up our own ignorance of the ethical dilemmas concerned.

ALISON DAVIS

Blandford Forum, Dorset DT11 0LE

1 Dyer C. Sterilisation of mentally handicapped adults. *Br Med J* 1988;297:1494. (10 December.)

Radiotherapy's second setback

SIR,—In condemning the cyclotron centre at St Thomas's Hospital Dr Richard Smith has written a biased and factually incorrect article.¹ He contradicts himself in stating that the government's backing of the project with £6m was against expert advice and without consultation. He distortedly reports neutron results on 50 Hammersmith patients, only 3% of the total treated, and ignores about 15 000 from other centres. All the points he makes against neutrons can be refuted.

The international expansion of neutron treatment belies his reckless description of "a dangerous white elephant." Throughout the world existing cyclotrons are being modernised and new ones installed. It is calculated by the European Organisation for Research into the Treatment of Cancer (EORTC) Particle Therapy Group that on present results about six cyclotrons are needed in the United Kingdom. Neutron treatment is a priority in America, and a superconducting cyclotron is being developed at Detroit to make neutrons more available. This spread of neutron treatment stemmed mainly from work at Hammersmith, although Dr Smith doubts the validity of those results. Furthermore, all centres now use the Hammersmith treatment regimens.

Dr Smith mentions the role of the Prime Minister's ophthalmic surgeon. Mr Packard's interest is, however, in the cyclotron's other product, the proton beam. Protons give cure rates of 90% in choroidal melanoma with retention of vision in most cases.²

The article states that "very recent" evidence suggests that neutrons were effective in treating salivary gland tumours. This was first reported from Hammersmith in 1979³ and was followed by similar results from Europe and America on 289 patients with local cure rates of 67% compared with 24% in 254 patients treated with x rays.⁴ These tumours include adenocarcinoma normally resistant to x rays. The results suggest possible benefit from using high energy neutrons in gastrointestinal tumours. Local cure rates of 60% are reported in unresectable cancers, particularly in sarcomas and cancer of the paranasal sinus and prostate, and in tumours that recur after x ray treatment.^{5,7}

These results were obtained despite the inadequacies of the first machines. Modern cyclotrons with more penetrating beams will give better treatments and fewer complications. If Luddite views had prevailed in the 1950s x ray treatment would not have progressed to linear accelerators. These improved results by about 30%. The degree of funding and effort now going into particle therapy (neutrons, protons, and light ions) internationally is considerable. As with many new advances it has generated some animosity in this country.

The cyclotron at St Thomas's will be used on tumours known to respond better to particles, on some that have recurred after other treatments, and, in conjunction with other centres, in assessing neutrons in deep seated tumours. Tumour metabolism and vascularity will be studied by positron emission tomography, which will also be available in the cyclotron centre.

The Cyclotron Trust had an innovative funding scheme which was accepted by the Treasury. All profits from the cyclotron will go to the Department of Health, which will, it is estimated,

receive £6m in 10 years after the start of treatments.

MARY CATTERALL

Cyclotron Trust,
London W14 8QB

- 1 Smith R. Radiotherapy's second setback. *Br Med J* 1988;297:1625-6. (24-31 December.)
- 2 Seddon JM, Gragoudas ES, Polivogiannis L, et al. Visual outcome after proton beam radiation of uveal melanoma. *Ophthalmology* 1986;93:666-74.
- 3 Catterall M. *Fast neutrons in the treatment of cancer*. London: Academic Press, 1979:219-34.
- 4 Griffin TW, Pagak TF, Laramore GE, et al. Neutron vs photon radiation of inoperable salivary gland tumors, result of an RTOG-MRC co-operative randomised study. *Int J Radiat Oncol Biol Phys* 1988;5:1085-90.
- 5 Hendrickson FR. The use of neutron beam therapy in the management of locally advanced non-resectable radio-resistant tumours. *CA* 1988;38:353-61.
- 6 Laramore GE, Krall JM, Thomas FJ, et al. Fast neutron radiotherapy for locally advanced prostatic tumors. Results of an RTOG randomised study. *Int J Radiat Oncol Biol Phys* 1985;9:1621-7.
- 7 Errington RD. Re-irradiation of advanced tumors of the head and neck with fast neutrons. *Int J Radiat Oncol Biol Phys* 1986;12:191-5.

SIR,—“Radiotherapy's second setback”¹ is a setback not so much for radiotherapy as for the whole scientific medical community in the United Kingdom. Neutron treatment may well have a place in the management of certain rare tumours, as Dr Richard Smith points out, but the real defeat, both insulting and humiliating, is to the whole process of grant awarding policy for cancer research in this country. There are many such bodies—including the Medical Research Council, Cancer Research Campaign, Imperial Cancer Research Fund, and others—that are increasingly well coordinated in their efforts. Indeed, the UKCCCR (United Kingdom Coordinating Committee for Cancer Research) has its office within the Medical Research Council's headquarters. All of these bodies, as well as informed medical opinion, have reacted with outrage at the news of Mrs Thatcher's brazen method of simply ignoring them in spending £6m of public money, a sum large enough to offset this year's overspending by my own district health authority, which has resulted in innumerable cuts to the service.

For the Prime Minister to disregard her advisers so blatantly and pursue a spendthrift policy of such proportions is surely among the more appalling paradoxes that this supposedly cost conscious government has perpetrated. I applaud your editorial in all but one respect: it is far more than a setback—a scandal, surely?

JEFFREY S TOBIAS

Department of Radiotherapy and Oncology,
University College Hospital,
London WC1E 6AU

1 Smith R. Radiotherapy's second setback. *Br Med J* 1988;297:1625-6. (24-31 December.)