goodbyes are said, the dying person may refuse to receive any more visitors or open letters." I tried to consider the process of dying from the point of view of the survivors and, using Keats as an example, to emphasise the importance for them of the phase during which the dying person comes to say farewell. This phase, which precedes the "detachment" of Kubler-Ross, may have an influence on the health and wellbeing of the bereaved. I suggested that the physician may have a role in helping the patient to realise the need to say goodbye.

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[1] Meares R. *JAMA* 1981;**246**:1227-9.

Animal experiments

SIR,—The anonymous leading article on animal experiments (6 February, p 368) suggests a complete misunderstanding of the case against animal exploitation.

While non-human animals differ from us in many ways—such as intelligence, size, language, appearance—such differences are entirely arbitrary and can occur within our own species. The one important similarity between ourselves and other animals is that we can all suffer and on this basis we believe that both human and non-human animals should receive the same consideration and respect.

It is therefore incorrect to say that groups campaigning on behalf of animals at the British Association for the Advancement of Science meeting "were agreed that some research using animals is justifiable." The National Anti-Vivisection Society, which also contributed to the meeting, could never condone any animal experiment unless carried out for the benefit of the individual animal. Surely this is the basis for a truly civilised society.

In addition, you suppose that, were research workers to consider Lane Petter's five questions, "the protest groups would then be left with no convincing grounds for complaints." Can it really be imagined that we would be happy to allow the researcher to continue to regulate his or her own practice?

Since pain cannot be regulated, the logical way forward is to prohibit those experiments (for example, the use of animals in experimental psychology or to test cosmetics) which have become unacceptable in an evolving moral climate.

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SIR,—Minerva (13 February, p 518) refers to the responsible comment of the editors of the *British Journal of Radiology* (1982;**55**:108) which followed my letter with Dr E H Porter to that journal complaining of certain very cruel animal experiments published by them from American authors. The editors' comment stated their proposal in future to refuse articles describing experiments which "would have been unlikely to secure Home Office approval in Britain." This is as far as any British journal could be expected to go in its fostering of higher standards of humanity in animal experiments. However, it should not be concluded that this commendable proposal would discourage the kind of inhumanity we were objecting to. In the experiments we complained of, large numbers of mice were allowed to die from the painful and distressing complications which ensue from irradiation of the upper alimentary tract. Experiments involving similar deaths have previously been done and reported in this country. Evidently the Home Office did not disallow them. As an experienced experimenter on animals I would say that reforms are long overdue which could meet the reasonable objections of campaigners for animal welfare.

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Drugs acting on the urinary tract

SIR,—The second *British National Formulary* and the prospect of future editions at six-monthly intervals are welcomed. The usefulness of this practical book is confirmed by its prominent display in wards and outpatient clinics.

We would like to draw attention to the lack of a section dealing with drug treatment of the lower urinary tract. There are over 200 drugs listed in the *British National Formulary* which have a direct pharmacological action on the bladder and urethra, and 199 drugs listed have side effects on the urinary tract.

Drug treatment is of major importance in the management of disorders of lower urinary tract function in the male and female, which include retention due to decreased bladder activity or increased outlet resistance, incontinence due to increased bladder activity or decreased outlet resistance, and frequency and urgency of micturition. Many prescriptions for these conditions are given but we suspect that the benefit is often in doubt owing to either the wrong choice or the wrong dose of drug. There is now a voluminous medical literature on the subject and we believe that a practical evaluation of this information should be included in the next edition of the formulary.

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Postexposure immunoprophylaxis against B virus infection

SIR,—Dr B E Juel-Jensen in his comments (9 January, p 113) on our paper (5 December, p 1495) wondered why we did not suggest using topical acyclovir as a prophylactic measure. Our reason was that we have tried this procedure in the same rabbit model of the human disease and found it unsatisfactory. The results that we obtained in two separate experiments are summarised below.

In the initial experiment we inoculated six rabbits subcutaneously with 50 TCD_{50} of B virus (the tissue-culture dose, TCD_{50}, is the amount of virus producing cytopathic effects in 50% of inoculated wells). We then treated three rabbits with a 5% solution of acyclovir in dimethylsulphoxide (DMSO); the other three were treated similarly with DMSO alone. Fifty microlitres of the appropriate fluid was applied to the inoculation site and rubbed vigorously until the skin dried. Treatment was begun with 15 minutes of infection and was given four times daily (at intervals of two hours during the working day) for five days. The three control rabbits died at nine, 10 and 14 days after infection—the three rabbits treated topically with acyclovir had a slightly longer survival time, dying on days 10, 14, and 21.

In the second experiment, we increased the concentration of acyclovir to the maximum that could be dissolved in DMSO (10%), used twice the volume (0·1 ml), administered it throughout the 24 hours, and continued treatment for 12 days. Despite this energetic treatment the results were similar to those of the first experiment. Control rabbits died on days 7 and 9, the remaining rabbit being killed on day 15, at which time there was clear evidence of progressive neural involvement. Treated rabbits died on days 11 and 12, the remaining rabbit being killed on day 15 with a well-developed local lesion. In contrast to this, both of two rabbits injected with a single dose of immune serum at the inoculation site survived without any sign of disease.

Although the numbers of animals used in these experiments were small, the results appeared to us to be conclusive; compared with immunoprophylaxis, topical application of acyclovir had little effect apart from a possible slight prolongation of survival time. We cannot, therefore, recommend that topical acyclovir should be used as chemoprophylaxis against possible infection with B virus.

We wish to thank Dr G Appleyard and Dr P Collins, of the Wellcome Research Laboratories, for their kind donation of acyclovir and for helpful discussion.

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Cetrimide allergy presenting as suspected non-accidental injury

SIR,—Dr J K Inman's report of a suspected non-accidental injury (6 February, p 385) due to cetrimide shampoo is interesting. However, this is unlikely to have been an allergic reaction. If 12% cetrimide is left on the skin for more than a few minutes it is likely to produce an irritant reaction. The subsequent test to determine allergy should be done using 0·1-0·01% aqueous cetrimide. Moreover, allergic contact dermatitis in infants is quite unusual.

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The case against district contracts

SIR,—I found Dr Harold Thomas's letter on district contracts (6 February, p 424) incomprehensible. Doctors are contracted employees of health authorities yet Dr Thomas states specifically that the contract can be held by anyone so long as it is not held by "either the DHSS or the employing authority." If we do not accept the rights given and the responsibilities required by an employee's contract, we should not accept the employer's payment.

The detachment and integrity referred to as being advocated by Sir John Richardson for a practitioner in "exercising his personal judg-