

Contemporary Themes

Pets in hospitals

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The role of animals in society is well recognised. The programme director of the Tavistock Institute of Human Relations has emphasised the key role of the pet and stated that "... within the family the animal provides opportunities for projection and displacement of feelings as well as for direct expression of concern and care, of anxiety and fear; and for testing out capacities for power, authority and influence within the family context."¹

The medical contribution which may be made by pets has not, perhaps, been fully appreciated until recently. There is now, however, evidence that the pet animal may play a part in the treatment and care of some patients. Workers in the field of psychotherapy have particularly emphasised the value of pets and Corson *et al*² reported encouraging results when psychiatric patients in hospital were brought into close contact with dogs. Investigations into the psychotherapeutic value of cage-birds to old people³ showed that the presence of budgerigars generally had a beneficial effect. The role of pets in child development was first emphasised over 70 years ago⁴ and has since been investigated by many workers, including Levinson,⁵ and this is now reflected in the widespread use of animals in schools.^{6, 7} They have proved particularly valuable in teaching mentally handicapped children.⁸ Many social workers and occupational therapists testify to the practical benefits that may ensue from encouraging contact between children and pets, and it is no coincidence that children's wards now frequently house a pet hamster, cagebird, or goldfish.

Against these points, however, are the various arguments of those who, for one reason or another, oppose close contact between man and animals. Considerable concern is justifiably expressed over zoonoses, many of which are transmissible from pets to man. In addition public criticism is often levelled against domestic animals because they smell, cause traffic accidents, foul pathways, or make too much noise. Such arguments may influence the decisions of those who have to decide whether or not animals are kept in a hospital. Other justifiable criticisms of pets in the hospital may be levelled because of expense or because animals are both time- and space-consuming.

These and other objections have to be remembered whenever the question of animals in hospitals is raised. Whether keeping such animals is desirable is debatable but I intend to draw attention to some of the problems and pitfalls of maintaining animals under such circumstances and to make basic recommendations regarding their care. While primarily intended for guiding those working in hospitals, this paper may also prove a useful guide for those who maintain animals in penal institutions and educational establishments.

Choice of animal

Of the many vertebrates and invertebrates that can be kept in captivity only certain species are usually satisfactory for the hospital environment. Keymer⁹ drew attention to the unsuitability of non-domesticated animals as pets on account of several factors, among them the danger of zoonoses and the problems associated with managing less common "exotic" species. Nevertheless, there are still many suitable domesticated species and time must be spent in choosing the most appropriate. The following points should be taken into consideration.

Activity—Some animals, such as golden hamsters (*Mesocricetus auratus*), are nocturnal and therefore less suitable for daytime viewing; at night they are active and may annoy staff and patients. Diurnal species, such as mice (*Mus musculus*) and guinea-pigs (*Cavia porcellus*), are preferable. Cold-blooded animals—for example, tortoises (*Testudo* spp)—tend to be sluggish in cold weather and they hibernate in winter. This will limit their appeal, though some indigenous species can prove useful "short-term" pets (see below).

Docility—An animal should be chosen which quickly becomes tame, such as a mouse, or one which rarely bites, such as a guinea-pig. The danger of bites may be an argument against keeping carnivorous species. A bite or scratch from an animal not only damages the relationship between it and the patient but may also cause physical damage or transmit disease. Moreover, different strains of animal and individuals vary in temperament and, for that reason, professional advice should be sought.

Food requirements—Herbivorous animals are usually easier to feed than carnivorous ones. Thus a rabbit (*Oryctolagus cuniculus*) is generally preferable to a ferret (*Mustela furo*) or a tortoise to a snake. Availability of food is an important consideration since species vary in their requirements. Guinea-pigs must receive a dietary source of vitamin C and will usually therefore require fresh vegetable food while other rodents can synthesise sufficient vitamin C and can thrive on readily available proprietary diets, usually pellets or powder. The latter provide a useful way of feeding animals in hospitals and are recommended whenever possible. Pelleted diets are clean and easy to handle and may often be provided in a food hopper; this may permit the animal to be left untended for 36 hours safely. Water is essential for most species and should always be available. Many species, such as rabbits and rodents, will learn to drink from a water bottle; this is more hygienic than a bowl and it cannot be spilt. In addition it permits the animal to be left for 24 hours (or more) without needing extra water. Care must be taken, however, to ensure that the water bottle, which is usually obtainable from a pet shop, is functioning properly.

Habitat requirements vary considerably. Amphibians are usually unsatisfactory animals in hospitals since they require damp conditions and, in the breeding season, free access to water. Fish require a watertight tank or similar container and, in the case of tropical species, the water must be kept warm; this is not usually a problem in the hospital but if there is a power failure or if the heater breaks tropical fish may die. Most rodents will thrive in a cage with sawdust, hay, or paper tissues for bedding and will tolerate a range of temperatures.

Susceptibility to disease—Some species are prone to several infections or diseases, including zoonoses which may be transmitted to man. Examples are terrapins, which may be carriers of *Salmonellae*, and psittacine birds (parrots, macaws, cockatiels, etc), which may carry, and themselves become infected with, psittacosis. Primates (monkeys and allied species) may pose a particular health threat to

humans, and as a general rule should never be kept as pets. Consideration must also be given to the dangers of hypersensitivity reactions in patients; so-called "bird fancier's lung" is recognised among bird keepers and this and similar diseases could occur in a hospital, especially, for example, in a long-term psychiatric unit where aviary birds may be bred in large numbers.

The final choice of a suitable animal must depend on the circumstances and will vary from place to place. No species is perfect and one must often strike a compromise—for example, as was mentioned earlier, budgerigars make ideal companions and are easily caged and fed. They are psittacine birds, however, and may be a source of psittacosis. In such a case a decision must be made by a senior member of staff after considering the patients and the risks and benefits involved. A surprisingly wide range of species, however, may prove successful in different environments. A home for handicapped children, for example, may be able to accommodate a donkey or a sheep; in a geriatric ward, however, goldfish or a canary are likely to prove more acceptable.

It is impossible in this article to discuss all the different species but a general guide to suitable medium-sized animals is as follows.

Very suitable in the hospital environment—mice, guinea pigs, canaries and other small cage birds, tortoises, coldwater fish, rats, rabbits, budgerigars (but see earlier), clawed toads, and invertebrates (such as stick insects).

Moderately suitable—golden hamsters, gerbils, mynahs, frogs, toads, and salamanders.

Unsuitable—terrapins and turtles, snakes, parrot family (except budgerigars), and primates.

Under certain circumstances animals may be kept for a limited time and then released, as has been suggested in schools.⁶ An example is the keeping of tadpoles in a paediatric ward; the tadpoles should be returned to a pond as soon as they begin to grow legs since they will then become more difficult to feed and maintain. Such a system imposes less strain on staff than when long-term animals are kept and permits a variety of species to be maintained over a period. Even when circumstances do not permit keeping animals in hospital contact with them may, nevertheless, be achieved in various ways. Chief among these is a visit or lecture by a suitably experienced person accompanied by living animals which may be seen and handled by the patients. Alternatively, where circumstances permit, a visit by selected patients may be made to a zoological collection or wildlife park. That such exposure to animals may prove beneficial is indicated by the success of the Greater London Council's "mobile zoo" experiment, which permitted children in built-up areas to handle and manage animals.¹⁰

Preparation for animal

It is important to prepare for the animal before it actually arrives. A cage, bedding, and food should be obtained. The care of the animal must be discussed and plans made for it at weekends and holidays when some staff, such as occupational therapists, may not always be available. Details of housing cannot be discussed here but a particularly important point in hospitals is to ensure that cages are secure and that the animal is unlikely to escape. Expert advice may be sought from a veterinary surgeon, from a knowledgeable and experienced member of staff, or from official bodies and animal welfare organisations.

Among the organisations that can usually advise on pets are the Royal Society for the Prevention of Cruelty to Animals, the Universities' Federation for Animal Welfare, the Zoological Society of London, the British Veterinary Association, the Laboratory Animal Science Association, and the Medical Research Council's Laboratory Animals Centre (addresses are given later). Many books and leaflets are also available and should be obtained and read in advance; a selection of suitable reading is listed in the Appendix.

Health

It is important that an animal remains healthy, both for its own sake and in the interests of the patients and staff who come into contact with it. The latter is particularly important in the case of patients who are on immunosuppressive treatment since an apparently non-pathogenic organism may then prove dangerous.

When possible a newly acquired animal should receive a veterinary examination and be screened for the presence of unwanted pathogens and parasites. In particular, faeces should be cultured for *Salmonella*

spp. Preferably, an animal should be obtained from a source recommended by the Medical Research Council's Laboratory Animals Centre since this will ensure freedom from several infections and diseases.¹¹ All those starting to keep animals in hospitals are advised to contact the Laboratory Animals Centre, whose staff is willing to advise on care as well as sources of animals.

Alternatively, it may prove possible to arrange routine laboratory checks on living animals by a veterinary investigation centre or public health laboratory. These will, however, be of less value since only a limited number of tests (for instance, faecal culture) can be performed on the individual live animal and negative results under such circumstances are usually of little significance.

There are many diseases which are transmissible from animals to man and these are well documented in many textbooks.^{12 13} In some cases detection of such conditions may be difficult because of the presence of a tolerant infection (such as lymphocytic choriomeningitis in mice) or an inapparent infection (such as the carriage of *Salmonella* spp by some animal species). This is why the acquisition of healthy animals is emphasised. The dangers of disease being transmitted from animals to man, however, may be reduced in several ways.

Hygiene should be practised at all times. Animals should be kept away from patients' beds and, in particular, from places where food is prepared or eaten. Preferably, animals should be housed in a separate annexe or room, in an area designated as such. Patients should wash their hands after handling animals and any surfaces such as table tops which have become contaminated by animal faeces or urine should be cleaned with an approved disinfectant. The quaternary ammonium compounds—for example, cetrimide—are suitable agents for general use. Although contact with the animal is frequently the object of the exercise, care should be taken to discourage patients from kissing the pet or exposing themselves unnecessarily to its faeces, urine, or saliva.

Sick animals should be isolated immediately and professional advice sought. Particularly significant clinical signs which may suggest a zoonotic infection are diarrhoea, dysentery, and nervous disorders. If an animal is very ill it should be killed on both humanitarian and health grounds. A veterinary surgeon may be consulted on the appropriate methods of euthanasia. A useful booklet on the humane killing of animals is available. A necropsy is recommended if facilities permit since this may help to produce a diagnosis so that other animals may be treated or destroyed and appropriate action taken. Routine treatment of animals may be practised and may prove useful in preventing zoonotic infections. This particularly applies if dogs (*Canis familiaris*) come into contact with patients; the dogs should be routinely dosed at monthly intervals with a suitable anthelmintic (such as piperazine) to control *Toxocara canis* and other nematodes. Advice on such matters should be sought from a veterinary surgeon.

Adequate care—Animals are less likely to become ill if they are well managed. One person should be responsible for the daily care of the animals and for making appropriate arrangements when he or she is away. Fresh food and water should, as a general rule, be provided daily and the cage must be cleaned and disinfected thoroughly at least once a week. Animals react adversely to sudden changes in diet, temperature, or humidity, and every effort should be made to avoid these.

Conclusions

Animals can play an important part in medicine but their care in the hospital necessitates careful planning and close liaison between doctor, nursing staff, and social worker or occupational therapist. In some cases it may prove impracticable to maintain animals on a long-term basis but contact with them may still be permitted and, where applicable, encouraged.

The important points that must be considered when keeping animals in a hospital may be summarised in the following rules:

- (a) choose the animal carefully;
- (b) ensure that it comes from a healthy source or have it checked thoroughly for disease;
- (c) maintain it well, with particular attention to food, water, and cleaning;
- (d) practise strict hygiene; and
- (e) seek expert advice promptly if an animal becomes ill or if a zoonotic infection is suspected.

Adherence to these rules will help ensure that the animal is humanely maintained with the minimum inconvenience and that it poses no unnecessary health risk to patients or staff.

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Appendix

USEFUL ADDRESSES

British Veterinary Association, 7 Mansfield Street, London W1M OAT.
MRC Laboratory Animals Centre, Woodmansterne Road, Carshalton, Surrey.
Laboratory Animal Science Association, 38 Mill Road, Buckden, Huntingdon PE18 9SS.
Royal Society for the Prevention of Cruelty to Animals, The Manor House, Horsham, Sussex.
The Universities' Federation for Animal Welfare, 230 High Street, Potter's Bar, Hertfordshire.
The Zoological Society of London, Regent's Park, London NW1 4RY.

BOOKS AND PUBLICATIONS

Keeping Animals in Schools. Department of Education and Science. London, HMSO, 1971.
Jennings, T J, *Animals in the Home and Classroom.* Oxford, Pergamon Press, 1971.
The UFAW Handbook on the Care and Management of Laboratory Animals, ed Universities' Federation for Animal Welfare, 4th ed. Edinburgh and London, Churchill Livingstone, 1972.

The UFAW Handbook on the Care and Management of Farm Animals, ed Universities' Federation for Animal Welfare. Edinburgh and London, Churchill Livingstone, 1971.

UFAW Publications and Information leaflets obtainable from UFAW (address above). Many of these are available free of charge and cover the care of goldfish, tortoises, hamsters and gerbils, and other animals in captivity.

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Mortality of bereavement

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Summary

The death rate of a group of 87 widowers and 279 widows was followed for two years from the death of their spouses. The life tables for England and Wales 1970-2 indicated that the expected number of deaths would be 6 men and 11 women. The actual numbers (9 men and 11 women, 5.5%) were not significantly different, though there were more widowers' deaths during the first six months of bereavement. There was no significantly greater mortality among those whose spouses had died in hospital; but when this had occurred the health of the second spouse was likely to have been poorer than that of those whose spouses had died at home.

Introduction

In 1967 Rees and Lutkins¹ reported the death rate of 51 widowers and 105 widows whose spouses had died during the six-year period after 1 January 1960. All the subjects lived in and around the small market town of Llanidloes. During the two-year

period after the death of their spouse 28 (18%) of the bereaved people died (table I). The rate is surprising since it is more than that found in earlier studies based on larger samples.^{2,3} When Rees and Lutkins's¹ paper was brought to my attention data had just been collected about the death of every Sheffield citizen who had died from cancer of certain sites (pharynx, breast, bronchus, stomach, colon, and rectum) during the two summers of 1971 and 1972.⁴ It was decided to ascertain whether the death rate of the spouses of these people agreed with that of Rees and Lutkins's group or those of the earlier studies.

Method

In the original terminal care study 366 patients (279 men and 87 women) had been married and were living with their spouse at the time of their deaths. To avoid revisiting every bereaved household we examined the electoral roll to identify all the surviving spouses who had registered as electors at least two years and two months after the index deaths. Thus the electoral roll compiled from returns made in October 1973 (which was published early in 1974) was first examined to ascertain some of the spouses of those who had died between May and September 1971. We found that the inclusion of a spouse's name on the electoral roll could not be taken as an absolute indication of his or her survival because of the practice of retaining names from year to year in default of a new registration,⁵ but with the co-operation of the electoral registration officer it was possible to identify over half of the spouses surviving more than two years.

The remainder of the spouses were visited at their homes when possible; and if they had moved away inquiries were made of neighbours and friends about their survival. The housing department informed us of the whereabouts of people in cases where whole neighbourhoods had been cleared for redevelopment.

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