

flotation catheters. Thrombosis has been reported previously with new catheters but has usually been noticed when the catheters were removed after several days. One report noted damping of the waveform after two to three hours with increasing difficulty in wedging over the next four to five hours⁴ owing to thrombosis. The patient in case 2 developed this problem within 30 minutes of insertion. We have reused nine catheters for a second time, including the two described here. Clotting may have occurred on these catheters but passed unnoticed because either it did not interfere with their monitoring function or it was stripped off during removal. Several factors may be responsible for the production of thrombus over such a short duration when catheters are reused. The amount of surface damage suffered during insertion will be increased. Lipoproteins are absorbed into the latex of the balloon⁵ during its first use which will not be removed but may be altered by ethylene oxide sterilisation; these will then act as foreign proteins in a second patient.

If it is necessary to reuse intravascular catheters the additional risks to the patient should be carefully considered.

References

- ¹ George RJD. How to insert a flotation catheter. *Br J Hosp Med* 1980;**23**: 296-301.
- ² Elliott CG, Zimmerman GA, Clemmer TP. Complications of pulmonary artery catheterization in the care of the critically ill. *Chest* 1979;**76**: 647-52.
- ³ Foote GA, Schabel SI, Hodges M. Pulmonary complications of flow directed balloon-tipped catheter. *N Engl J Med* 1974;**290**:927-31.
- ⁴ Yorra FH, Oblath R, Jaffe H, Simmons DH, Levy SE. Massive thrombosis associated with the use of the Swan-Ganz catheter. *Chest* 1974;**65**:682-4.
- ⁵ Swan HJC, Ganz W. Use of balloon flotation catheters in critically ill patients. *Surg Clin N Am* 1975;**55**:501-20.

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Letter from . . . Chicago

Pets and pests

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Advocates of a liberal education should be pleased to hear that during last year's strike by air controllers a young woman doctor was filling in time at Chicago's O'Hare airport reading *Plutarch's Lives*. The intensity of her concentration, or the size of her book, attracted the attention of the little girl sitting next to her. "Is this a good book," she asked; and on being assured that it was, she further wanted to know if it was as good as *Charlotte's Web*—which she had liked so much that she had read it six times.

The correct answer to this perplexing question might well have been that the main difference between Plutarch's noble Romans and E B White's modern Americans is in their attitude towards pets. Veterans of that traditional occupation lately reclassified as "parenting" will recall that Wilbur, always in danger of being converted into pork chops and sausages, was saved from that ignominious fate by the selflessness of a spider and the tender heart of a young girl. By contrast, the great Julius Caesar, returning victorious from one of his campaigns, was shocked to see certain wealthy strangers in Rome carrying puppy dogs and monkeys in their arms, embracing them, and fussing about them. "Are women in their countries not used to bearing children?" was Caesar's prince-like reprimand. But even the decadent foreigners in Rome might have been surprised at the attention lavished on Chicago's pets, not only in health, when they are merely being paraded up and down Michigan Avenue in their red overcoats, but also in disease—when tonsilectomies and cataract extractions are commonplace, and more heroic life-sustaining procedures corroborate the fact that in America, as in ancient Egypt, the life of animals is sacred.

A new wife for that price

I was first introduced to this concept some 12 years ago, when our vast unexplored basement had become colonised by an undetermined number of stray cats. Among these was one so wild that nobody had ever succeeded getting within five metres of it, until the day when it began to lie about lethargically, seemingly afflicted by Kussmaul respiration. Despite emphatic disclaimers of responsibility on my part, the cat was taken off to the vet ("what, you're not just going to let it die"). Nothing was heard for about six weeks. Then one day, while I was at an important meeting, I was called out by an urgent message from the animal hospital. The cat, I was told, was doing poorly, the peritoneal dialysis had failed, and, since it was not fair to the animal to continue treatment, permission was requested to turn off the respirator.

More recently our 19-year-old cat also began to lie about the house listlessly, looking for all the world as though it had lived the last of its 133 human-equivalent years. This time there being no possible excuse, I soon found myself a reluctant visitor at a modern animal clinic. In the waiting room there was utter pandemonium, as children were shrieking, puppies were yelping, and receptionists were yelling out the names of the next patient to be seen. The walls were covered with pictures of splendid eagles and melancholy cats, there was a large chart of all the families of dogs known to inhabit this planet, a wooden board listed the names of the visiting physicians with their respective degrees, and a suitably impressive plaque commemorated all the selfless benefactors of the institution. We had to wait for a while, the doctors being busy (as we found out later) with two difficult emergencies—a perroquet incommoded by an impacted egg and a turtle afflicted with ulcerative shell disease, a rare condition requiring parenteral gentamicin as well as local applications of iodine. At last we were led past a room filled with "patients"

files and ushered into examining room two, where a young doctor lovingly picked up the cat and began to examine it. She tested the skin turgor and found unmistakable signs of dehydration. Then she shone a light at the cat's cataracts, took the rectal temperature, listened to the heart and lungs, determined by palpation that the right kidney was knobly, and expressed some urine from the bladder for immediate analysis. Finally, she obtained an immediate set of blood chemistries (this would have taken a minimum of six hours at the County Hospital) and found that although the blood sugar concentration was 800 mg/dl, the urea and creatinine concentrations were but moderately raised, reflecting dehydration. While immediate admission to hospital and the administration of fluids by subcutaneous infusion were clearly indicated, I was grateful that nobody thought of ordering a CAT-scan to rule out a pancreatic lesion causing diabetes, because this patient was covered neither by medicat nor by CATastrophic insurance. Happily the cat came home after two days, and has since been maintained on two daily units of NPH (U-40) insulin. "Why didn't you get another cat? In our country you can get a new wife for that price," asked an insensitive non-Egyptian colleague from another world, unable to see the parallel between sacred cows and sacred cats, and probably also out of sympathy with the recent efforts to extend the sanctity of life to the moment of conception, if not earlier.

Unborn life

There was a Bill to this effect in a senate subcommittee, earlier this year, preceded by two days of hearings in which a panel of carefully selected expert witnesses talked at length about birds and bees and zygotes and pregnant cattle. As a result of these deliberations it was proposed that: "Congress finds that present-day scientific evidence indicates a significant likelihood that actual human life exists from conception." If adopted, this Bill would give persons living at an intrauterine domicile the same rights under the fourteenth amendment of the constitution as those having already abandoned this cozy environment; and in effect it would outlaw not only abortions but also intrauterine birth control devices and contraceptive pills. The American Medical Association declared the practical implications of these proposals staggering. Six former United States attorneys general assailed the Bill as a dangerous circumvention of the constitution, noting that the Supreme Court, in its 1973 decision legalising abortion, had found that it could not be certain when life begins. Most legal scholars also agreed that Congress did not have the authority to overturn the decision made by the Supreme Court.

Meanwhile, there has been considerable interest in providing the unborn person with a suitable and legally acceptable environment. Living abroad, in the womb of a surrogate mother, has recently become quite fashionable, though the rent for under one year's occupancy may be as high as \$20 000. Several women have now been artificially inseminated for love, for money, or because they enjoy being pregnant; and according to a prior contract have on parturition handed over the baby to its legitimate owners. Nor surprisingly, unscrupulous men have got into the act, trying to make money by inducing young women to become surrogate mothers. Some of these women have developed serious emotional problems, and, in California, the frequent scene of such avant-garde developments, one surrogate mother decided to keep the baby.

More rats than people

More pertinent, for Chicago, is the issue whether an emancipated fetus should be allowed to vote, thus enabling the unborn to join the deceased and the apocryphal and other dubious participants in the political process, and cast their vote, at least once, if not several times. For nothing seems to have changed here since Upton Sinclair shocked the world with *The Jungle*, and described how the precinct captains would take the new immigrants

virtually straight from the boat to the polling booths. The corruption remains, 80 years later, as does the way of getting things done through political connections, and there are even the periodic scandals at the county hospital. Nor has the squalor of the ghettos disappeared, though the ethnic groups have changed as years went by. Only the stockyards, with their millions of cattle and Wilburs, have vanished. But the children in the ghettos are still being bitten by rats, which have grown bigger and more resistant to ordinary anticoagulants, so that there are now two rats for every person in Chicago, requiring extensive pest control programmes, with crews of exterminators using ever more powerful poisons. These rats have an astonishing birth rate, one pair and its offspring producing 15 000 rats in a year—and they are blessed with a prodigious appetite that leads them to consume some 10% of their body weight each day, as well as gnawing other peoples' property to trim their incisors, which would otherwise grow by five inches a year. Besides being hated for aesthetic reasons, they also transmit a whole host of diseases, traditionally plague and typhus, but more pertinently trichinosis and salmonellosis. Only the Brattelboro rat, famous for its inability to synthesise vasopressin, has escaped universal opprobrium. Indeed, in September, scientists from all over the world met in New Hampshire to honour this distinguished experimental subject, who has allowed so much knowledge to be gained about diabetes insipidus and renal function and also about the remarkable ways in which vasopressin may improve the memory of normal subjects and especially of patients suffering from depression.

Another notable pest, last year, was the Mediterranean fruit fly, threatening California's \$14 billion a year agricultural industry. Its invasion led to massive spraying with malathion, not only in California but also in Florida, where a reconnaissance detachment of four fruit flies was surprised and ambushed by the local authorities. Despite "excessive widespread anxiety and over-reaction based on fear and lack of information" the public was reassured by the health department that malathion was not carcinogenic, mutagenic, teratogenic, or capable of producing neurological injuries. In Southern California, however, the medfly has now been joined by the Oriental fruit fly, a larger, stronger, and equally destructive insect that may have immigrated illegally from Hawaii aboard an unfumigated papaya or a prohibited mango, but which may be controlled by application of a cocktail consisting of a female pheromone and the non-toxic insecticide Naled. Meanwhile, tiny cinch bugs are sucking the juice from the nation's sorghum crops; corn-feeding cutworms and alfalfa weevils have produced the worst crop infestations recorded in 20 years; last year the mountain pine beetle destroyed about four million pine trees; the spruce budworm is threatening millions of acres of spruce and fir; and the oak-feeding gypsy moth is being vigorously sprayed with Dylox, a compound as toxic as malathion.

Scrub-suits and other scandals

An altogether different type of pest is currently afflicting most of the nation's hospital operating rooms, where it has caused considerable financial deficits through the loss of surgical scrub-suits. Most of the offending agents are reported to be young, often belonging to the medical student or resident species, who apparently view surgical scrub-suits as not only comfortable but also exceedingly chic. A variety of preventive measures has been tried, but even changing the colour of the suits from green to pink has failed to "discourage thefts by macho-conscious men." More encouraging, however, is the news that Tommy, a popular bear at a southern Illinois summer camp, won an eleventh hour reprieve. It had been reported that a boy had pulled his ear during his breakfast, and the bear had manifested his displeasure by scratching the young culprit's arm, leading a judge to rule that the bear should be destroyed and have his brain searched for rabies, despite the astronomical odds against finding any. But, while everybody was pleased about the bear's

narrow escape, there has been some concern about wild ducks and other wild fowl contaminated with the insecticide endrin becoming a potential cause of poisoning in 17 States and causing the hunting season to be cancelled.

Other news come from Oklahoma, where a dentist became so angry when a patient refused to pay for her false dentures that he threw her to the ground and pulled the \$600 set of Swiss porcelain teeth from her mouth. In Seattle surgeons worked for six hours to recover a table knife accidentally swallowed by a patient trying to dislodge an aspirin tablet from his throat. The knife migrated out of the oesophagus and was finally removed from the chest—unlike what happened to the patient who swallowed forty 100 mg aminophylline tablets and two razor blades. Given ipecac, a new approach to the treatment of swallowed razor blades, he vomited some of the tablets and possibly one of the razor blades, before being transferred to a larger hospital. A chest x-ray film showed the blade sitting at the level of the carina, but oesophagoscopy found no trace of the offending object. A second x-ray film showed it to have moved below the level of the diaphragm, and at laparotomy the razor blade was found in the stomach, neatly folded in half and safely wrapped in its original silver foil.

From Chicago comes another newspaper exposé, this time about the private ambulances, which collect public funds for conveying the sick and injured across the city. The reporters found most of the ambulances to be dilapidated, their lights and

shock absorbers often non-functional, their brakes, doors, seats, and tyres in terrible shape, with faulty oxygen and resuscitating equipment, with soiled linen often being reused, and rats being a common occurrence. The drivers were reported to be frequently abusing the patients, speeding with sirens sounding and lights flashing when there was no emergency, and there were also complaints of patients waiting for many hours to be picked up. Finally, there have been questions about prisoners being allowed to sell their blood to commercial manufacturers of plasma albumin. The prisoners may donate blood twice a week and receive \$7 each time, leading to reservations about taking advantage of a captive population and about spreading hepatitis. And it was pointed out that screening tests have a 6-11% margin of error, and that 3-5% of prisoners, especially the addicts and homosexuals, were carriers. But advocates of the programme thought that donating blood had boosted prison morale and reduced crime by 60%, as well as providing life-saving plasma. "I am not a bloodsucker, I am a phlebotomist," said the general manager of the company, which last year made a profit of half a million dollars from 250 000 donations of plasma at five penal institutions. Besides, "the more blood we take, the better," says Yudel, the healer, applying his leeches in one of Sholom Aleichem's tales, "because all illness comes from bad blood."

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MATERIA NON MEDICA

Wedge-tailed eagles

There could be no doubt about it. It was a pair of eagles. Here I was in an inner suburb of Perth, with its population of 750 000, motoring to a nearby call down a road which I had travelled hundreds of times, and there, slowly planing and wheeling above the car, was a pair of wedge-tailed eagles. I stopped just short of a small park and thinned stand of pines, the only greenery around. Other vehicles sped by, lorries rumbled, gears crashed, cars winked their indicators with seeming irritation to pass me. But I was not to be put off, for here was one of Western Australia's great sights.

The birds circled, lost height, were carried up again without a tremor of wing movement. With superb economy of effort their paths crossed and recrossed. The only movement was some fine adjustment by the broad wedge-shaped tail, the feature from which they derived their name, and a jerky nervous ranging of the head searching for possible, but unlikely, prey 100 feet below. The great dark wings, displaying the characteristic five or six extended feathers on the ends, for all the world like a scarecrow's simulated hands, were motionless.

Aquila audax, Australia's largest bird of prey, until recently has been regarded as vermin and could be shot on sight. Imagine that: shooting an eagle! Something 40 inches long with a six-foot wing span was not easily missed either. The rationale was that they carried off newborn lambs. As this has never been observed, and they mainly eat carrion anyway, the stigma of vermin has been removed. But even now they are not a protected species and there is no penalty for their destruction.

These huge birds range all over Australia but are almost invariably seen in hilly country areas, so this city appearance was a unique moment to be savoured. As they take up to seven years to change from the golden brown colour of their youth to the very dark brown of the adult, this pair must have been fully mature. Owing to the traffic I could not hear their characteristic whistle of "coo-wee-el," but it was enough to have observed them within 200 yards of the surgery. Up to that moment I had seen in the area nothing more breathtaking than a pelican: no slouch itself when soaring on a thermal. My impassive compatriots hurried by intent on the business of meeting deadlines or clogging their coronary arteries, while I watched the majestic aerial ballet for 10 minutes until the birds drifted from view over the Swan River far away on my right.

That was six months ago, and although I travel that road every day I have never seen them again, although I never fail to look. Their tran-

sit across my horizon was living art. I felt elevated and I miss them still.—JAMES H LEAVESLEY, general practitioner, Perth, Western Australia.

Coming home to a real coal fire

Having recently moved from the smokeless city centre of Newcastle upon Tyne to a more rural setting my wife and I are, for the first time since our childhood, living once again with an open fire. It is quite remarkable how easily we have slipped back into the rituals associated with tending to it, rituals which must have been indelibly learned, reflexes conditioned by the warmth and sense of wellbeing induced by a well-looked-after fire.

And we remember other things. The sense of pride an individual displayed in his or her ability to light the fire with an absolute minimum of newspaper and sticks of wood; the skilful use of the "blazer" or "bleezer," a sheet of metal with a handle which was placed across the front of the fireplace to encourage a draught of air to pass through the newly lit fire to effect more rapid ignition; and the even more skilful use of the poor man's blazer, which consisted of a newspaper hand-held in front of the open fire. In this latter case an experienced fire lighter would be able to judge by the colour of the paper the precise moment that it was about to burst into flame and would be able to dispose of the smouldering mass quickly, safely, and with a maximum of panache by crumpling it up and throwing it into the newly kindled fire. And then there were the habits lingering from an earlier era when people had to contend with hardship such as does not seem to exist now. Bronowski-style bricquettes homemade from otherwise useless coal dust and time-served cooking fat; the use of multiple fire bricks to cut down the size of the grate and the rate at which fuel was used (inevitably associated with complaints that "The fire doesn't put out much heat"); criticisms directed at excessive use of the poker, which might result in live coal being deposited prematurely in the ash pan; and the careful sieving of the ashes to ensure that not the smallest particle of useable cinder was consigned prematurely to the dustbin.

But although we have adapted ourselves very readily to the open fire, our elderly cats, unaccustomed to the phenomenon of a naked flame in the living room, act uneasily and rarely come near. Meanwhile, the newly acquired kitten, full of the bravado of youth, gets as close as she possibly can.—J P SUNTER, consultant histopathologist, Gateshead, Tyne and Wear.