Dealing with the aftermath: the role of the vet following conflict or disaster

The needs of animals are often thought to be of secondary importance to the needs of people in the aftermath of natural disasters or conflicts. However, the fate of people and animals is often intrinsically linked, and failing to appreciate the fundamental role that animals play in the lives of people in many countries can create further problems in situations where life is already difficult. The vital role of the veterinary surgeon following conflict or natural disaster was discussed at a seminar organised by the Royal Army Veterinary Corps (RAVC) and the BVA Overseas Group, held at the Defence Animal Centre in Melton Mowbray on April 14.

IRAQ, Afghanistan, Kosovo, Bosnia, Somalia, Mozambique, Indonesia – all countries that have suffered or are currently suffering from the effects of conflict or natural disaster, and all countries where veterinary expertise has been required. While media images from such areas primarily focus on the human cost, livestock and draught animals are often an essential part of the lives of the people affected. Subsequent to the immediate humanitarian and welfare efforts, longer-term work is needed to secure a sustainable future for both people and animals.

‘You have to take a long-term view – you can’t just parachute in for the photo opportunity’, said Mr Jeremy Hulme, chief executive of SPANA, describing the charity’s increasing role in providing emergency relief following conflicts or disasters. Taking a short-term view could compound the problems faced by people, he continued. For example, in a refugee camp in Darfur, where SPANA is the only veterinary charity currently working, feeding the refugees’ donkeys had become a priority. Over 10,000 donkeys had died in the camp because the emphasis had been on helping the people – yet these people relied on the donkeys for transport and for tasks such as collecting firewood. The camp was home to 70,000 people, who now had only 1500 donkeys between them.

People affected by disaster or conflict were often as concerned for their animals’ wellbeing as for their own, he said. For example, in Iraq, the Red Crescent had found that, at a human health clinic it had established, farmers would come to ask for veterinary advice for their animals, just as much, if not more, than for their own health care needs.

Lessons from Iraq

A more detailed picture of the situation in Iraq was given by Mr John Gripper, who had visited the country after the war had ended on behalf of WSPA to evaluate what the needs were in terms of animal welfare and how best to meet them. Such evaluation was vital in all similar situations, he said, and there were common elements, whatever the country or situation. Issues to be considered included not only what response and aid was required, but also how it was to be sourced and delivered, what infrastructure was in place to support it, who would organise the response and delivery of aid, and what the budget and funding requirements were.

There were also the matters of accreditation, accommodation, communications and transport, as well as the language barrier – ‘if you can’t speak the local languages or the local dialects, then you are off to a very bad start’ – and the need for an interpreter. Respect and sensitivity for local culture and religion were essential if any effort was to succeed.

Establishing partnerships with local organisations and other non-governmental organisations was vital, as was being prepared to ‘go to the top’. ‘It’s important that you start at the top and work down . . . unless you can get official approval for the work you are doing, you will find there will be difficulties and problems in your way.’ In a war situation, being able to work with the army was also necessary.

Dealing with the media was also a consideration, he said, adding that the media could be very helpful but had to be given the right sort of material. Whatever charity was involved, some part of it would want to raise money on the strength of the work being done.

His visit to Iraq had shown that there had been extensive looting of all veterinary facilities; the veterinary college and state veterinary offices in Baghdad had been stripped of everything – not just moveable items, but also light switches, sinks and roofing material. Before the war, there had been 15 state-run veterinary hospitals throughout the country, and these had...
supplied local clinics. All had been looted of veterinary drugs. There had been virtually no private companion animal practice.

Recommendings that the focus of the relief operation should be on farm livestock, Mr Gripper’s report of the situation had suggested that the best way to help in the short term would be to provide veterinary medicines. At the time of his initial visit, the Food and Agriculture Organization (FAO) was in the process of arranging for veterinary medicines to be sent out to Iraq, but this was going to take two to three months. He had discussed with Iraqi state veterinary surgeons what medicines would be most appropriate. It was not possible for vaccines to be supplied because the breakdown in infrastructure had resulted in failure of the electricity supply and, consequently, a lack of refrigeration and a guaranteed cold chain. Therefore, it was decided that antibiotics, wormers and vitamins would be most useful.

Once the medicines – five-and-a-half tons, costing £92,000 – had reached Iraq, further logistical problems had become evident, he said. Security concerns meant that the state veterinary surgeons could not deliver them outside Baghdad. Fourteen of the 15 veterinary hospitals were in US-controlled territory, the other in British-controlled territory. With assistance from the US Army, the distribution of the medicines was completed without incident.

Veterinary surgeons, while not the only people able to deal with animal welfare issues in disaster relief, had advantages over other people, Mr Gripper believed. For example, they had a scientific training that equipped them to think in a logical and sensible way about a situation; they were used to dealing with disease control; they were used to handling animals; and they had a practical, rather than sentimental, approach to the care of animals. Veterinary surgeons also had the benefit of the ‘veterinary community’, ‘I find that there is, as a veterinary surgeon, an immediate advantage in being able to talk to other veterinary surgeons,’ he said.

**Afghanistan: rebuilding the veterinary infrastructure**

Mr David Love, who had worked as the interim regional director of a project in northern Afghanistan, described the difficulties facing those who were trying to rebuild the country’s veterinary infrastructure. Before the conflict in 1988, there had been about five million cattle and about 27 million small ruminants in the country. Today, he said, there were fewer than four million cattle and about 15 million small ruminants. There were insufficient numbers of cattle and small ruminants to rebuild the livestock populations – the lambing percentage was 0.6 lambs per ewe per year and the average calving interval for cattle was about 37 months.

One of the first tasks had been to establish a regional office with a distribution centre and a training centre in Mazar-e-Sharif. The training centre was now working with its second group of 25 local paraveterinarians. The Afghan government’s veterinary department had recognised the paravet qualification and, of the first group of 25 trainees, 23 had been certified by the government.

There was no companion animal practice in Afghanistan. However, because of the amount of unexploded ordnance buried in the country, there was a very active mine clearance unit in Kabul. There were 200 working mine-clearing dogs in the city and a breeding programme had been established. The programme had been running for about six years and all dogs in the unit were now homebred. The chief veterinary surgeon there was probably the only vet in Afghanistan who worked with companion animals, Mr Love said.

The project that he had been working on involved a number of international organisations, such as the Dutch Committee for Afghanistan and the US Agency for International Development, as well as the local Afghan Veterinary Association, and aimed to give support to the infrastructure for animal health. The budget was US$12 million over two-and-a-half years, and the aim was to establish or re-establish at least 300 veterinary field units throughout the country over that period. Each unit would be staffed by at least one paravet and at least one veterinary surgeon; the latter would cover no more than 10 veterinary field units.

The veterinary field units had originally been established by the FAO but many had fallen into disrepair. One of the veterinary facilities that Mr Love had visited had only one syringe, one fixed-handle scalpel and one (bent) needle, and an old-fashioned electric boiler, which was used to boil these up. ‘That was all they had. They had no drugs, they had nothing – and it was a major problem,’ he said. Other units, however, were better off; for example, one had a paraffin-powered refrigerator.
and a cool box for transporting medicines. A relatively small amount of money could make a huge difference and he described one unit in Faizabad that was moved into new premises that were refurbished and established as a veterinary unit for a total of US$150.

Some of the funding had been allocated to setting up a proper cold chain facility and a veterinary drug wholesale operation. As in Iraq, a problem had been encountered in ensuring that veterinary medicines were kept at their optimum temperatures. The aim was to set up a central store in Kabul and seven regional stores. Each veterinary field unit would be supplied with a fridge and a freezer, and six small, transit-sized refrigerated vehicles and one larger refrigerated lorry would be purchased to transport veterinary medicines under proper conditions. An agreement had also been reached with an airline to distribute vaccines by air.

**Natural disasters**

While many of the speakers concentrated on the aftermath of conflicts, Mr Ray Butcher, a practitioner from Uxbridge, spoke about his experience in Banda Aceh in Indonesia following last year’s tsunami (VR, January 29, 2005, vol 156, pp 126-129). He was asked to go out to Banda Aceh by WSPA, which also sent teams out to Sri Lanka, Chennai in India and Thailand. While these countries had been affected by the same disaster, the needs in each country were very different as a result of differences in culture and infrastructure, he said. For example, while there were local societies for WSPA teams to liaise with in these other countries, there was none in Aceh.

Mr Butcher explained that, in other countries he had visited previously on behalf of WSPA, he had encountered the moral dilemma of weighing human suffering against animal suffering. He had overcome this by saying that caring for the animals was also caring for humanity. However, in Aceh, the scale of the human tragedy far outweighed the animal welfare problems.

Any disaster relief operation had to have short- and longer-term aims, he said. The short-term aim was to provide aid to restore the situation to a pre-disaster state. There was also the potential to improve conditions. However, it was not possible to impose a different culture on an existing one without educating the people and being accepted by them. ‘There is no magic wand in such situations,’ he said.

**Effects on people**

The fate of animals in a disaster will have other impacts on the human population in addition to the loss of food sources, transport and livelihood, said Colonel Simon Miller of the Army Medical Directorate. There was also the potential for zoonoses. In a presentation that considered the epidemiology of disasters, he introduced a number of principles that were applied to evaluate how disasters might affect the health of people, with the aim that the veterinary surgeons present could then apply them to animals. It was important to apply the principles in order to ensure that a second disaster – an outbreak of infectious disease – did not result in further deaths. It was not possible to apply a blanket approach to every disaster; instead, thought was required about what action was appropriate.

A disaster was, he said, a disruption of the human ecology that exceeded the capacity of a community to cope. The effects of a disaster on human populations ranged from death and injury through psychological trauma to environmental exposure and the spread of communicable diseases. Outbreaks of communicable diseases were not inevitable following a disaster, but were actually more of an exception – in the last 25 years of the 20th century there had been 14 major flood disasters, but only one subsequent major outbreak of disease (Sudan in 1980, where an outbreak of gastrointestinal disease followed the flood). However, outbreaks were more likely in certain situations, such as overcrowding following population displacement, or after environmental collapse, particularly when water became contaminated with sewage. One of the top priorities in any disaster situation was to produce potable water, he said.

Another important risk factor that impacted on disease in the human population in the aftermath of a disaster was a loss of control of disease vectors. In some parts of the world, Colonel Miller said, there was a precarious control of vectors. A disaster distracted attention away from measures to control vectors of diseases such as malaria and dengue.

A further principle to bear in mind was that disease outbreaks might not occur until some time after the disaster. There was the incubation period for the
disease to consider, as well as a possible delayed impact of environmental health effects and ecological changes.

‘Diseases don’t just happen,’ he said, and it was important to be aware of which diseases were endemic in an area and which might be imported. Health surveillance was critical.

Colonel Miller described some of the impacts of the Asian tsunami on the people affected. ‘Interestingly,’ he said, ‘dead bodies have not posed a major risk to health. It is always thought that the risks to health posed by the dead bodies have not posed a major risk to people affected. ’ Interestingly, he said, ‘dead bodies have not posed a major risk to health. It is always thought that the risks to health posed by the dead. ’ There had been relatively few cases of gastrointestinal disease but lots of cases of respiratory disease caused by near-drowning, and many of the wounds caused by being in the water had become contaminated and there had been over 60 cases of tetanus in Indonesia.

The one zoonotic disease that was assessed by the World Health Organization as a real risk was leptospirosis. There were fears that, following the floods, a proliferation of rats would cause pollution of the water.

Two other military speakers also gave presentations at the seminar. Brigadier Alan Hawley, Director, British Forces Germany Health Services, was commander medical of the third division during the Gulf War, and was in charge of the British military hospitals. He discussed some of the problems encountered and said that one of the distinguishing characteristics of a conflict situation was that difficult decisions were often required on both a personal and other levels. Medicine, he suggested, could be an effective means of winning over the local population quickly. It provided a ‘high-impact, quick hit’ in the battle for hearts and minds, he said.

Major Suzy Read explained the role of the organisation Civil Military Cooperation (CIMIC), which had been established in 1997 to provide the military with an interface between the civilian and military populations in military operations. Military operations nowadays, she said, always had a civil dimension, and the civil sector was inevitably part of both the problem and the solution to any crisis. The purpose of CIMIC was to establish and maintain the full cooperation of the civil population and agencies within an area of operations in order to create conditions that offered support to the commander of those operations, and that would support a lasting solution to the crisis. CIMIC was not, she said, ‘an optional extra’ or ‘a way of passing the time’.

Validity in the veterinary field

Summing up the seminar, Brigadier Andrew Warde, director of the Army Veterinary and Remount Services, said that the meeting had generated much food for thought: each of the presentations had given a different insight into the problems that arose after conflicts and disasters and some of the solutions. There were a number of important lessons, and many of the broad medical principles that were used as a framework to approach human disaster situations should be analysed by vets and tested for their validity in the veterinary field. There was also a need for training in applying the principles. Every situation was different and a blanket approach was not appropriate.

Papers in this week’s Veterinary Record

ELISA detection of antibodies to *Alternaria* in cats

THE saprophytic fungus *Alternaria* is an opportunistic pathogen that can infect human beings and animals and has also been associated with atopic disease. On p 633, Mrs Charlotte Dye and colleagues describe an indirect ELISA to detect anti-*Alternaria* immunoglobulin G (IgG) in the serum of cats. Samples were obtained from 63 cats, including 12 specific pathogen-free (SPF) cats and kittens and four cats with confirmed *Alternaria* infections. Specific IgG was detected in the serum of 52 (82 per cent) of the cats; those under two years of age had significantly lower IgG concentrations than older animals. The cats’ sex, access to the outdoors, environment and breed had no significant effect. The cats with confirmed infections did not have significantly higher antibody levels. All the adult SPF cats were positive; the authors note that it was difficult to obtain a negative control serum because *Alternaria* is so common in the environment.

Establishment of biochemical reference ranges in ewes of various ages

REFERENCE biochemical ranges are important for the interpretation of data. They can be influenced by various factors, and it is thus important to establish reference ranges for different groups of animals. On p 636, Dr Pascal Dubreuil and colleagues establish reference ranges for mid-gestation ewes of different ages. Ewes in the last two months of pregnancy were sampled from flocks in Québec, Canada, and the samples from each flock were pooled into those from ewes one, two to three, or four or more years of age. The pools were analysed for electrolytes, chemistry and enzymes and the values were compared with published reference ranges. In total, 83 pools, containing 750 individual samples, were analysed. All the values obtained were within published ranges, and there were slight changes in some parameters with increasing age.

Lidocaine and bupivacaine for brachial plexus block in dogs

A BRACHIAL plexus block is used routinely to provide anaesthesia and analgesia in arm surgery on humans, but there are few reports of its use in veterinary medicine. On p 639, Dr Sandra Wenger and colleagues evaluate the intra- and postoperative analgesic effect of a brachial plexus block induced in dogs undergoing forelimb surgery under general anaesthesia. Ten dogs received a mixture of lidocaine and bupivacaine, injected into the region of the brachial plexus; 10 control dogs received an injection of saline at the same site. The block was induced successfully in all the dogs and there were no adverse effects. The control group received significantly more analgesia, intraoperatively with fentanyl and postoperatively with methadone, because of their signs of pain. The authors conclude that the low dose of local anaesthetic used resulted in a significant reduction in the need for analgesia and carried a low risk of systemic toxicity.

Brigadier Andrew Warde: many of the broad medical principles applied to humans should be tested for their validity in the veterinary field

**The Veterinary Record, May 14, 2005**