Title
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Use of Animals in Surgical Training of Veterinary Students

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Many students, both veterinary medical and pre-veterinary, are concerned with the nature of surgical training at various veterinary medical schools. The major concern expressed to me is whether experimental animals are allowed to recover from anesthesia. As a result, I conducted a survey to find out how these aspects of surgical training were being handled at the 27 veterinary schools in the United States.

The administrators of the schools were asked the following questions:

1. What species of animals are used in your surgery training program and where are they obtained?

2. Does your program allow animals used for practice surgery to recover from anesthesia at any point or are they killed without recovery (non-survival)?

3. If the answer to question 2 is yes, how many surgical exercise sessions are done with an individual animal? How much time is allowed between each session? Please list the surgical procedures done at each of the sessions on an individual animal.

The results of the survey, which was done in 1986, are as follows:

Number of responses: 18
Number answering questions: 15

In many cases, the responses included much more information than was requested. Because the major question had to do with whether survival surgery was permitted, I felt it would be fair to all only to include information directly related to this.

The dog was the most widely used animal. Most of the schools allowed survival surgery with at least one recovery from anesthesia (see table). In some cases there were three surgical sessions with two recoveries from anesthesia (multiple survival). The interval between surgical sessions ranged from one day to four weeks.

Number of schools allowing survival surgery, by species:

<table>
<thead>
<tr>
<th>Species</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dog</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Horse/pony</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Sheep</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Cat</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Cow</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Pig</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Goat</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

Four schools that responded to the survey did not allow survival surgery for one or more species. Kansas State allowed no survival surgery; California-Davis allowed no survival for dogs; Washington State had no feline survival procedures; and Michigan State allowed no survival procedures on cows and dogs. This information does not reflect the type of surgical procedures performed on these animals.

Minor procedures or those for which postoperative pain was considered not severe were done on a survival basis. More invasive procedures or those considered to have a greater likelihood of severe postoperative pain were done when the animal was going to be killed at the end of the session (terminal procedure). Judgment as to whether a particular procedure was minor or major seemed to be fairly consistent among the different schools. In some cases, for example, stifle joint surgery, some allowed survival and others did these as terminal procedures.

For the purposes of this report, "pound" means any facility to which unwanted or stray animals are taken, "dealer" means anyone engaged in the buying or selling of animals for profit, and "breeder" means any establishment that breeds animals on its premises. It is recognized that dealer and breeder are often one and the same. The source of dogs and cats was usually a pound or dealer, while large animals were generally obtained by donation or through a dealer.
It is my belief that the teaching of surgical principles requires the use of living animals. However, if animals not needing the surgery are going to be used ("practice animals"), I feel it is imperative that they not be allowed to recover from anesthesia. The surgical training we give veterinary medical students is very basic and brief; it does not make surgeons of them. At best, for the average student, it may increase their confidence and initiate them to the complexities of surgery. In training them, we concentrate on concepts rather than on specific procedures per se. Therefore, any program that would accomplish the same thing should be acceptable. There is no need for the animals to suffer in the process, which all would do to some degree if allowed to recover from anesthesia after surgery. The students can obtain the needed experience in postoperative care during their clinical year during which they will care for patients who needed the surgery. As a result, both the students and the patients benefit.

Ideally, it would be highly desirable to teach surgical principles using actual patients who need the surgery. There are no morally relevant differences between, for example, the dogs we use in a surgery class and dogs who have a human guardian. Animals from either group have the same capacity to suffer or to enjoy life. They have the same inherent right to share the experience of living on this planet. It matters not, from a moral perspective, whether the dogs are "purpose" bred for the surgery class or they are taken from the pound. As in the training of surgeons for people, veterinary medical students, with proper supervision and time, can learn by using actual patients. It is my hope that the U.S. veterinary schools will eventually adopt this type of program, as has been done in the United Kingdom. In the meantime, I hope all will phase out survival surgery.

(Editor's note: Due to space limitations, we were unable to reproduce the comprehensive listing, by school, of the data summarized herein. Those interested in the complete results should contact the author at:

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One answer to the age-old question, "Why don't you want to be a people doctor?"

I think I could turn and live with the animals, they are so placid and self-contained; I stand and look at them long and long. They do not sweat and whine about their condition; They do not lie awake in the dark and weep for their sins; They do not make me sick discussing their duty to God.

Walt Whitman: *Leaves of Grass*, "Song of Myself"

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