

American Association of Bovine Practitioners Embryo Transfer Committee Report

Due to the growth of embryo transfer in this country and the increased demand for the exportation of healthy, fresh and frozen embryos, the embryo transfer committee of the American Association of Bovine Practitioners offers this report. It is the desire of the committee that a nationally uniform guideline can be established by each state board of examiners, with the help of the AVMA, in order to insure the protection of the public and animal population and to resolve the ongoing debate over qualifications needed to perform embryo transfer.

During the past fifteen years the field of embryo transfer has moved from the research laboratory into the market place as a commercial enterprise. Along with this movement, many personnel from the research facilities started embryo transfer businesses. As techniques and equipment were simplified, many laymen outside the veterinary profession have made attempts to enter the field. The question now arises "Who is qualified by training and law to perform embryo transfer?"

Debate over the subject becomes more important as the embryo transfer business becomes more competitive as an alarming number of laymen attempt to enter the field. Debate is necessary because, as with all phases of medicine in this country, the public has a right to be protected against malpractice, and to expect recourse in the event that they or their property are harmed or damaged.

The debate centers around the question, "Is embryo transfer a part of veterinary medicine?" The practice of veterinary medicine is defined by the practice act of each state. Each act defines veterinary medicine as the art of diagnosing, prescribing medication, performing anesthesia and surgery and/or using any procedure or words or language to present one's self as a licensed veterinarian. Therefore, most phases of embryo transfer fall under veterinary medicine by definition.

Dr. Lester Crawford, Director of the Center for Veterinary Medicine of the Food and Drug Administration, cites the fact that any person using prescription drugs other than licensed veterinarians, or technicians under a veterinarian's direct supervision, would be in direct violation of the Federal Food, Drug, and Cosmetic Act and are punishable by fines up to \$1000.00 per violation and a prison sentence of up to one year *per offense*. The FDA under compliance policy guides 7125.06, chapter 25- Animal Drugs, further states "lay persons cannot be expected to have sufficient knowledge and understanding concerning animal diseases, pharmacology, toxicology, drug interaction, and other scientific parameters to use drugs in treating food producing animals." Specific drugs cited by Dr. Crawford in his letter to this committee are: estradiol, prostaglandin, xylazine (Rompun), follicle stimulating hormone, lidocaine, and gonadotropin releasing hormone. He further states that it is not legal for a layman to purchase these drugs for use on another person's animals, although he may use them on his own animals as long as he has established a veterinary-client relationship. This action covers all prescription drugs, not only those mentioned above.

In addition to these stern warnings by the FDA as proof of embryo transfer being a part of veterinary medicine, other reasons cited by members of this committee are listed:

- 1) Anesthesia (local spinal, or general) or sedation (Rompun, Acepromazine, etc.) must be performed by a DVM or under their direct supervision.
- 2) Any rectal evaluation of anatomical structures is a diagnosis.
- 3) Movement of embryos across state lines and to foreign nations requires that an individual with medical training in the field of animal disease perform the procedure in order to safeguard the

health of the livestock population.

- 4) All surgery must be performed by a veterinarian.
- 5) Veterinarians have malpractice insurance to insure that the public has legal recourse against unscrupulous veterinarians. Furthermore, veterinarians have license which can be revoked at any time that they are found to be in violation of the laws governing veterinary medicine.

When state practice acts were formulated years ago, there was no embryo transfer. As a result, it was not specifically included in practice acts. As pointed out earlier, by definition, embryo transfer is clearly a veterinary medical procedure. Several states have already updated their practice acts to include embryo transfer. Some states have faced challenges by various lobbying groups of non-veterinarians who would like to continue their illegal practice of veterinary medicine. Three years ago the American Association of Bovine Practitioners began providing training in embryo transfer to insure the public has a readily available, competent service. For the public safety and the continued strict control of animal disease, this committee recommends that strong stands be taken by the AVMA and AABP. Also, this committee recommends that the State Boards of Veterinary Medical Examiners in each state enforce all statutes of that practice act of that state. The committee offers its services to each of these state boards to assist in adopting proper legislation to enforce embryo transfer as a veterinary procedure.

Another area of concern addressed by this committee is the necessity for veterinarians that cross state lines into states in which they are not licensed, to work as a consultant with a veterinarian licensed in that state and/or observe all statutes of that practice act of that state. There should be a written agreement between the consulting veterinarian and the licensed veterinarian. The licensed veterinarian who obtains the services of a veterinarian not licensed in that state should have a veterinarian-client relationship with the client for whom he obtains service. The FDA statement on the establishment of veterinarian-client relationships is as follows:

"An appropriate veterinarian-client-patient relationship will exist when: (1) the veterinarian has assumed the responsibility for making medical judgements regarding the health of the animal(s) and the need for medical treatment, and the client (owner or other caretaker) has agreed to follow the instructions of the veterinarian; and when (2) there is sufficient knowledge of the animal(s) by the veterinarian to initiate a general or preliminary diagnosis of the medical condition of the animal(s). This means that the veterinarian has recently seen and is personally acquainted with the keeping and care of the animal(s) by virtue of an examination of the animal(s), and/or by medically appropriate and timely visits to the premises where animal(s) are kept; and when (3) the practicing veterinarian is readily available for follow-up in case of adverse reactions or failure of the regimen of therapy.

Further consideration was given by this committee to the pending certification program of the American Embryo Transfer Association which includes an educational requirement of either a DVM degree, or a Ph.D. degree in reproductive physiology before the individual or company could be certified. Degrees less than a Ph.D. or any lay person would not be certified. The decision supported by this committee and recommended by the AABP, AVMA, and State Boards of Veterinary Medical Examiners is that Ph.D. reproductive physiologists be allowed to perform embryo transfer services on a consultant basis *only* under the supervision of a veterinarian licensed in the state where the procedure is to be performed. They would also be

required to observe all statutes of the veterinary practice act of that state. In effect, this would be a similar situation as the non-licensed veterinarian working as a consultant with a licensed veterinarian in that state. Furthermore, the Ph.D. would be required to be certified by the AETA. Persons other than veterinarians licensed in the United States or AETA certified Ph.D. reproductive physiologists, would not be allowed to perform embryo transfer procedures and would be subject to FDA and state examining board penalties.

In summary, the Embryo Transfer Committee of American Association of Bovine Practitioners strongly urges rapid and concise movement on the following three positions:

- (1) That embryo transfer is a veterinary medical procedure that should be covered by the law in each state's practice act, and that the state board of veterinary medical examiners in each state be urged to take immediate action in accordance to this committee's recommendations.
- (2) That the previously defined guidelines be enacted to govern graduate licensed veterinarians working in a state in which they are not licensed.
- (3) That AETA certified Ph.D.s with a degree in reproductive physiology be allowed to perform non-surgical embryo transfer

procedures under the same regulations as those that apply to a graduate licensed veterinarian working as a consultant in a state in which he/she is not licensed.

Respectfully submitted,
The Embryo Transfer Committee of the
American Association of Bovine Practitioners

Committee Members

Chairman Dr. Joe Wright, Castroville, Texas; Dr. Robert Rowe, Middleton, Wisconsin; Dr. Mark Spire, Manhattan, Kansas; Dr. Joe Manspeaker, College Park, Maryland; Dr. Peter Elsdon, Fort Collins, Colorado; Dr. Craig Thompson, Ithaca, Michigan; Dr. David Roffey, New Berlin, New York; Dr. George Holzer, Caldwell, Idaho; Dr. Dick Carmichael, Keota, Iowa; Dr. Edwin Robertson, Harrogate, Tennessee.

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Abstracts

The immunophysiological basis for vaccinating ruminants against mastitis

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Aust. vet. J. 62: 145-153

SUMMARY: The roles of humoral and cellular defence mechanisms in protection of the mammary gland against bacterial infection are reviewed. Effective protection depends on opsonisation of pathogens and subsequent phagocytosis by neutrophils. A concomitant requirement for protection is the rapid infiltration of neutrophils into the infected gland. Immunological studies have shown the need to prime animals against antigens expressed by bacteria when they grow *in vivo*. Vaccination procedures which promote these mammary defence mechanisms are discussed.

Effect of thiabendazole treatment on feed intake, digestibility and selected blood values in lactating dairy cows

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Veterinary Record (1984) 116, 257-260

Observations of feed intake, digestibility, production and selected blood values were made during the winter housing period on 10 lactating dairy cows, naturally infected with gastrointestinal roundworms, which were either left untreated or dosed on two occasions with thiabendazole in-feed. While treatment had no significant effect on appetite or production, there was a 9.8 per cent improvement in cellulose digestibility ($P < 0.05$). An increase in circulating cholesterol in treated cows was associated with the improved utilisation of cellulose. It is considered unlikely that thiabendazole's primary anthel-

mintic activity was responsible for this effect. Treated cattle also exhibited a significant improvement in thyroid function during the course of the study compared with control animals. This might account for the increase in milk production reported in several trials following anthelmintic treatment of dairy cows.

Pre slaughter handling of cattle: The availability of water during the lairage period

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Aust. vet. J. 62: 163-165

SUMMARY: A comparison was made of the effect of providing or denying water to steers during the last 20 h before slaughter on carcass weight, bruising, muscle pH, and during the dressing process on the numbers of rumens from which ingesta was spilt and the number of heads and tongues condemned because of contamination with ingesta. All cattle were offered water from arrival at the abattoir until the start of the treatment period. In one experiment the steers were rested for 24 or 48 h after a 120 km journey before being slaughtered, while in a second experiment they rested for 66 h after a 725 km journey.

Giving steers access to water until they were slaughtered did not affect adversely carcass weight, bruise score, muscle pH or the incidence of ingesta spillage from rumens. The number of condemned heads and tongues was not consistently related to the availability of water. In the absence of any adverse effects it is recommended that cattle be provided with water during the lairage period.