Bovine Surgery: An Expanding Field

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The most common disorders seen are associated with one of the cow's four stomachs, the abomasum, which is the true stomach. It can become displaced, usually within six to eight weeks after calving, and then must be surgically returned to its proper position.

"This problem wasn't diagnosed until 1959," said Dr. Donawick. "And the procedure to repair it was developed here by Dr. William Boucher during the sixties." According to Dr. Donawick, this used to be a highly specialized surgery performed only at veterinary teaching hospitals.

Today it is done at large animal clinics everywhere. Our graduates learned it here and have taken it into the field, to the farmers, eliminating the need to bring the animal here. We now have to look for more complex cases as those which formerly were considered difficult have become routine to those who graduated from here. We have taught them well," Dr. Donawick stated that it is hard for the School to stay ahead of the practitioners. "We develop a technique, then we go out and talk about it, we teach our students and in a short time it is incorporated into the repertoire of practitioners. We are then no longer..."
unique and must progress to find solutions to other more complex problems.

This concept of biomechanical and practical solutions has led to many advances in bovine surgery. Dr. Donawick developed and perfected a technique to correct abomasal fistula, a condition which sometimes occurs after surgery to correct abomasal displacement. The cow develops an infection in the incision, the wound breaks open, and the abomasum shifts its position in the body cavity. This infection is localized, but it is a serious condition and has to be repaired. Dr. Donawick removes the diseased tissues and repairs the abomasum and returns it to its proper place. "It's a big, messy job, but we can repair the damage and heal the cow, she recovers and remains a milk producer." He explained that he has taught the technique to many practitioners and that it is now used at a number of large animal clinics.

Other surgeries performed at New Bolton Center include Caesarian sections for cows which have calving problems. Some of these cases may be relatively simple, others may be very serious, explained Dr. Donawick. "The case load at New Bolton Center consists of about 90 percent referral cases. Many of these are very serious," explained Dr. Donawick. "They are often the cases the practitioner cannot handle at his clinic. Here we do have facilities for general anesthesia and intensive care. Practitioners rarely do surgery requiring general anesthesia. Most surgeries are done with local anesthesia." According to Dr. Donawick, general anesthesia for cattle was virtually unheard of ten to fifteen years ago. "Today, with the new drugs, it is no longer a problem."

The two surgeons explained that the cost of surgical treatment at New Bolton Center is not that expensive. "If it gets too costly, the dairy farmer cannot afford it," they said. "We have to keep the cost down and this puts the squeeze on us. We do not really recover all the expenses, such as the wear and tear on the equipment, but then this is a teaching hospital." The mission of teaching, service and research is very much on the minds of the two men as they continually work to find better ways to treat cattle surgically and make this treatment affordable for the farmer. The advances made in bovine surgery during recent years show that this quest for solutions is not an impossible one and that it is an undertaking of economic importance to the cattle industry.

Dr. Tulleners came to New Bolton Center as a resident. He graduated from the University of California at Davis and worked as an intern at the University of Saskatchewan, Canada. He is now assistant professor of surgery and lives with his wife and child near New Bolton Center.

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Cattle can have orthopedic problems. "They can dislocate their hips," said Dr. Tulleners. "This is a serious problem because they cannot get up." He has repaired a number of such hips with Dr. David Nunamaker, professor of orthopedic surgery at New Bolton Center. "The ligament and joint capsule which hold the ball and socket joint together are torn," he explained. "We remove the damaged tissue, clean out the joint and replace the femoral head into the socket. Eventually the body forms fibrous tissue which stabilizes the joint." Dr. Tulleners continued by saying that footing for these patients is critical. "We place them in a stall bedded with sand so they have excellent traction. Cows make good orthopedic patients, they are very careful and deliberate, they rarely do anything hastily." He is also studying stifle repairs, another common orthopedic prob-