

Man's best friend to benefit from new surgical technique

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Dr Japie Venter

Dr Japie Venter, who specialises in small-animal surgery at the University of Pretoria's Faculty of Veterinary Science, is a master of his craft. Not only has he developed a new technique for preventative hip dysplasia surgery, but he is also embarking on small-animal surgeries that have rarely been done before. This makes him one of the few small-animal surgeons in the world with these credentials.

Hip dysplasia, a problem with which researchers across the world have been grappling for years, affects mainly dogs of larger breeds, such as German shepherd, Boerboel, Rottweiler and Labrador. While the world was asking questions about the genetic make-up and early detection of the condition Dr Venter, under the mentorship of Prof Louis Coetzee, developed a new surgical technique that is so innovative and successful that researchers and surgeons from as far afield as the USA and Singapore are interested in using the model on their canine patients.

Hip dysplasia in dogs is caused by abnormal development of the hip joint, which eventually leads to crippling lameness and painful arthritis. While Dr Venter is certified to perform all the different types of hip replacement surgery on dogs, he has developed a world-first, highly successful preventative procedure that is far less invasive.

This technique is far less painful than other available surgical procedures, such as removing the femur head and neck, and is performed on puppies of between four and five months old. According to Dr Venter, the puppies show immediate signs of recovery after the procedure and just want to get back to the important things in life, like running and playing. This preventative surgery ensures that the other pelvic growth plates develop normally and prevents the subluxation of the femur head from slipping out of the so-called hip joint. The defect caused by the removal of the pubic symphysis growth plate is stabilised by placing orthopaedic wires around it. This does not hinder the animal's normal movements in any way. Because the orthopaedic wire remains in the animal forever, these dogs will also be protected from dodgy backyard

breeders. Breeding society regulations require breeders to have the hips of their breeding animals graded by a specialist radiologist before breeding can proceed. The X-ray will detect the pelvic wires indicating previous surgical intervention and the dog will therefore not be used for breeding.

Dr Venter advises dog owners of large breed dogs to have their puppies screened at four months of age to determine whether they are at risk of developing hip dysplasia. The earlier the preventative surgery is done, the higher the success rate. It is also much cheaper than conventional invasive hip surgery.

However, this doctor's interests are not confined to our domestic four-legged friends. He is also interested in surgical procedures to repair fractured long bones in wild antelope and has already worked on a number of rare species. Since very little work has so far been done in this field, Dr Venter relies on his knowledge of small-animal surgery when dealing with complicated long-bone fractures in antelope.

Because of the current boom in the wildlife industry, more animals are being transported. Several factors, such as inaccurate darting and animals trying to escape from bomas, have led to an increase in long-bone fractures. When an antelope's leg breaks, it literally shatters into many small bone fragments. Putting these pieces back together demands the utmost creativity and skill.

Challenges presented by surgery of this nature include having to deal with bone with much less elasticity than the bone of dogs, which is why it splinters when it breaks. Reconstructing the bone fragments is a near impossible task and it is difficult to use any internal fixation option. External skeletal fixation has proven to be an exciting and innovative treatment option for these patients. However, postoperative management of wild animals remains a constant challenge.

Dr Venter is receiving increasing recognition in the wildlife industry for his ability to help injured animals, to the extent that game owners bring their injured animals from far afield to be treated at Onderstepoort. However, the very long periods of sedation that these animals have to endure during transportation and the subsequent operations can be fatal, and it is for this reason that Dr Venter is focusing on the development of a prosthesis that can be used by vets in the field so that injured animals need not be transported.

- Author Louise de Bruin