

# UP vets perform heart surgery on dog after heart murmur discovered during routine sterilisation

Posted on June 14, 2022



*Hera, who was at the clinic for sterilisation, was selected for a demonstration operation.*

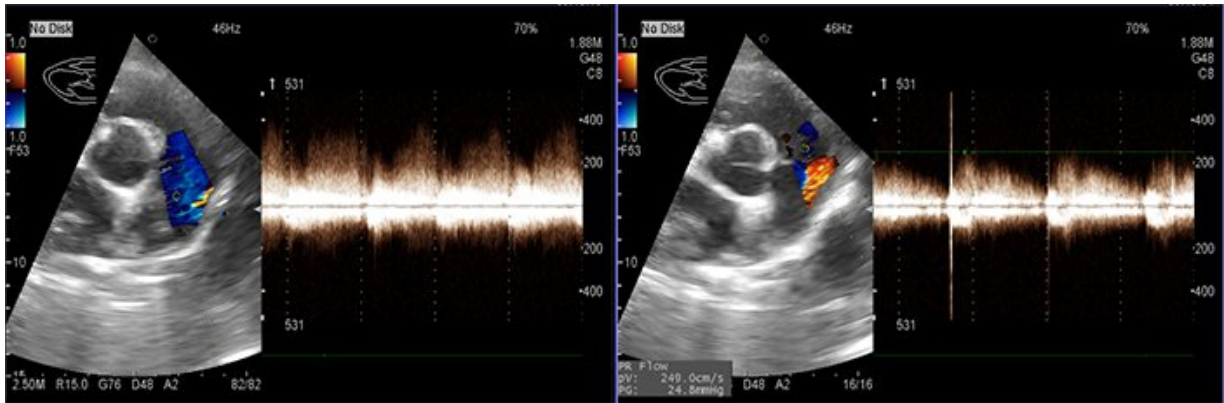
A routine visit by 20-month-old crossbreed Labrador/pitbull Hera to the sterilisation clinic at the University of Pretoria's [Faculty of Veterinary Science](#) led to the discovery of a heart murmur, and ultimately to heart surgery that likely saved the dog's life. The successful surgery was performed early in May at the Faculty's [Onderstepoort Veterinary Academic Hospital \(OVAH\)](#).

Dr Paul van Dam, Director of the OVAH, explains how the heart murmur that led to the surgery was found: "Students at the Faculty of Veterinary Science, as part of their training programme, all perform a number of sterilisations under close supervision during their clinical year. Female dogs are not only sterilised to prevent unwanted pregnancies and potentially abandoned puppies; there are other benefits too. Sterilisation reduces the risk of infection of the uterus, which is a life-threatening condition, prevents pseudopregnancy – where dogs display all the signs of pregnancy without actually being pregnant – and it appears to increase the dog's expected lifespan."

Students at the OVAH perform approximately 400 sterilisations per year, at subsidised rates, benefiting the community and providing them with teaching opportunities. Students perform simulated sterilisations in the [Faculty's Skills Laboratory](#) and have to attend a demonstration sterilisation before they perform the surgery themselves.

"Hera presented to our sterilisation clinic and was selected for the demonstration operation to be performed by one of the qualified veterinarians," explains Dr Klaas-Jan van de Wetering, OVAH veterinarian and postgraduate student at the [Department of Companion Animal Clinical Studies](#). "We teach our students that all patients undergoing general anaesthesia must first undergo a thorough clinical examination. It was during this examination that we found that Hera had a heart murmur – a swishing or whooshing sound made by turbulent blood flow through or near the heart."

The audible heart murmur heard while examining Hera was surprising, as these murmurs are not expected in such young patients. The anaesthetist on duty, Dr Keagan Boustead, was called in. He advised that the murmur should be further investigated before Hera was placed under general anaesthesia. An echocardiogram – a non-invasive, painless process that uses ultrasound waves to create images that allow the veterinarian to evaluate the heart – was performed the next day.



*In this image of the echocardiogram the blue and red areas show that blood is flowing through a blood vessel that should not be present in a normal dog – the patent ductus arteriosus.*

During this procedure it was determined that Hera had a patent ductus arteriosus (PDA), a congenital defect in dogs. In a foetus (before birth), the ductus arteriosus (a normal but temporary blood vessel that connects two major arteries) shunts blood from the pulmonary artery into the aorta, bypassing the still non-functional lungs. At birth, this blood vessel should close to allow normal circulation through the lungs, where blood is oxygenated. If it remains open, it leads to excess blood flow to the pulmonary circulation and left heart chambers, and this usually leads to congestive heart failure within the first two years of life. Heart failure and early death can be prevented by closing the temporary vessel surgically.

“In Hera’s case the ductus arteriosus had not closed. The owners could unfortunately not afford the heart surgery, but were very keen to have it done, as Hera is a much-loved member of their family,” Dr van de Wetering says.



*Hera was very happy to be back home after her heart surgery.*

“We do not see many cases with a PDA”, Dr van Dam says. “In Hera we saw a perfect opportunity to give back to the community we serve, while at the same time allowing our surgery and anaesthesiology residents – qualified veterinarians who are studying towards becoming specialists – exposure to the treatment of such cases, and it was decided to perform the surgery free of charge.”

The surgery was carried out without any complications and Hera could return home two days later, now without a heart murmur or the risk of developing early congestive heart failure, but a greater chance of living a long and happy life.

Published by Hlengiwe Mnguni