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SA veterinarians travel to Poland to treat elephant with tusk problem

NZG veterinarian, Dr Adrian Tordiffe and veterinary dentist, Dr Gerhard Steenkamp were invited to Poznan Zoo in Poland to treat an African elephant with a long-standing tusk problem.

Ninio has a history of tusk problems going back to 2005.

The entire procedure was filmed by a BBC film crew for a series called "Operation Wild". (Picture: Olga Dabrowska, Poznan Zoo)

Ninio, a 13-year-old elephant bull, was born in Ramat Gan Zoo in Israel. He was relocated to Poznan in 2009 where he is expected to play an important part in the zoo's elephant breeding programme. Although Ninio has not reached sexual maturity yet, he already weighs an impressive 5.2 tons. He is housed together with four other elephants at what is considered to be the largest elephant facility in Europe. The elephant house at Poznan Zoo was completed in 2009 at a cost of around R114 million.

History of tusk problems

Ninio has a history of tusk problems going back to 2005. In 2011, it became obvious that he had serious trouble with his left tusk. The tusk had fractured and he had discharge and blood draining from the exposed pulp cavity. It was clear that conservative medical treatment was not going to solve the problem and that more serious surgical intervention was necessary.

Poznan Zoo contacted Dr Gerhard Steenkamp, a veterinary dentist of the Faculty of Veterinary Science at the University of Pretoria, and asked him to assist. Dr Steenkamp has a keen interest in wildlife dentistry and has treated more than 40 elephants with tusk problems.

Dr Gerhard Steenkamp hard at work to remove the central core of Ninio's infected tusk so that the discharge and infected material could be drained out. (Picture: Dr Adrian Tordiffe)

Anaesthetising such a large animal in a small confined space for a few hours at a time can be rather challenging. Dr Tordiffe, a Research Veterinarian at the National Zoo, with experience in wildlife medicine and anaesthesia, accompanied Dr Steenkamp to Poland to ensure that the patient would safely sleep through a rather painful procedure. Besides their collaborative work in South Africa, these two veterinarians have treated elephants, hippos, seals, lions, cheetahs and other animals in China, Egypt, the United Arab Emirates and Namibia.

When the two vets arrived in Poland, their suspicions were confirmed that Ninio would unfortunately need to have his left tusk extracted. The left side of his face was moderately swollen and it was obvious that he had a serious infection in the root of the tusk. A small crack in his right tusk also needed to be examined and treated.

Although Ninio was relatively well trained by the Polish zoo keepers using positive re-enforcement techniques, he was not trained to accept intravenous anaesthetic drugs nor to lie down on a particular side during the anaesthetic induction. This meant darting him in his night room and, once he was sufficiently sleepy, manipulating him down onto his right side so that Dr Steenkamp could comfortably work on his left tusk.

Ninio's infected left tusk was unfortunately rather large, with a circumference at the lip of 40cm. The root of the tusk extended 70 cm up into a solid bone socket. After almost three hours of surgery, it became obvious that it was not feasible to extract the entire tusk safely in a single procedure.

Four days later, Ninio was anaesthetised again and manipulated onto his left side, so that Dr Steenkamp could examine and treat the small crack in his right tusk. Dr Steenkamp performed what is known as a partial pulpectomy, basically amputating the tusk behind the crack, removing a piece of pulp and plugging the hole with a plastic nylon implant. This procedure took less than 30 minutes and with some effort, Ninio's head could be lifted to allow Dr Steenkamp to do more work on the problematic left tusk. The central core of this tusk was removed and all the discharge and infected material were drained out.

This would render Ninio relatively pain-free and would dramatically reduce the risk of him developing a systemic infection. Unfortunately there was not enough time available to safely remove all the remaining fragments of ivory.

Ninio took a while to stand up after the second procedure, but once he was on his feet, he started eating and interacting with the keepers. With a bit of tender loving care, a bucket full of antibiotics and a few bottles of pain killers, it is expected that he will make a full recovery.

A third procedure is being planned for April or May this year to remove the remaining fragments of ivory in Ninio's left tusk socket. Once removed, the socket will close up over several months. His right tusk should grow out normally.

The entire procedure was filmed by a BBC film crew for a series called "Operation Wild", and should be aired some time in 2014.

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