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Nursing kite festival injuries in India

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ABSTRACT: Every year, Jivdaya Charitable Trust in Ahmedabad India runs a clinic to treat, rehabilitate and, if possible, release birds that are injured during the Hindi Kite Festival, Makar Sankranti/Uttarayan. I travelled to assist with the treatment and anaesthesia of the many birds and mammals that get caught and injured by the Manja or nylon kite strings, while either being flown or getting caught in kite strings left in trees and power lines around the city. The team consisted of two veterinary nurses, one vet student and three veterinary surgeons from across the world. We treated hundreds of birds and mammals including black kites, storks, ibis and bats.

Keywords: Travel; charity; avian; patagium; India; anaesthesia

11 January 2018 was finally here, I was off, ready for a new nursing adventure, winging my way to a foreign country. I have always loved travelling and in my early career days I worked around Australia, nursing at several practices to fund my travel. I always had my eye on various charity veterinary nursing abroad schemes, but they didn't ever come to fruition and life just got in the way. This was my chance! Leaving my young daughter was a difficult decision, but given the opportunity, I grabbed it with both hands.

My work started unexpectedly a day early. While taking a tour and saying hello to the staff at the charity on the first afternoon after my flight arrived, I saw that there was a queue of boxed and triaged kites (**Figure 1**) awaiting surgery and two of the voluntary veterinary surgeons had

started an anaesthesia between them. So, both I and the nurse from Wildlife Vets International (WVI, a British charity that provides support to international wildlife projects) offered to help – no going back now! So we set to work at two of the three theatre tables set up and ready to go (**Figure 2**).

During the main weekend of the festival Makar Sankranti or Uttarayan the centre opens its doors to the public and allows tours of the centre to show potential donors and interested parties around. This in turn raises awareness of the consequences of kite flying. They set up a front desk where birds are signed in and weighed. Birds are brought in either by members of the public or other animal charities around Ahmedabad. They assess the urgency of cases; give fluids, pain relief and antibiotics.



Figure 1. Line of black kites in boxes awaiting surgery.



Figure 2. Theatre set up with three work stations.

buildings or driving into strings while on motorbikes.

The Jivdaya Charitable Trust's founder was a member of the Jain religion and one of their major donors is the Jain community. Jains believe that we as humans have no right to take away an animal's life (BBC, 2014). This was a challenge to my western beliefs, as they are against euthanasia. Therefore, those birds that had severe injuries, e.g. fractures that would be difficult to fix or which would impede their flight, and in turn impede their release to the wild, had to be managed by either amputation or surgery to make the bird comfortable. These birds would then recover and be maintained in a captive environment in the charity's main aviary. This is part of veterinary nursing abroad and incorporating other people's beliefs. I found it frustrating and sad, but I had to put myself on another level and do my best to do my part well for the animal concerned.

After the first afternoon the injured birds began arriving in a steady stream. For the rest of the week, we worked late or even into the early hours. We were anaesthetising bird after bird (and the



Figure 3. Black kite with kite strings caught around feet and wings.

animal's skin and even bone. These kites and strings also get caught in trees and power lines and are left hanging, in which birds can get caught (Figure 3). Wildlife are not the only casualties. Every year, children and adults suffer injuries and in extreme cases death either from falling off



Figure 4. Typical wing injuries involving palatal membrane.

Makar Sankranti or Uttaryan is a Hindi festival celebrating the arrival of spring, over a long weekend (11–15 January) (Unknown, 2012, www.gujarattourism.com). Adults and children fly their kites very high, some fly with their kites to cut others down, sometimes Manja strings are used, which have sharp shards of glass glued to the strings. Manja has been banned but is still used; even without Manja, the nylon strings can cut through an



▲ Figure 5. Sutured palatal wound.

occasional bat) that had injuries from kite strings. The birds were induced with isoflurane (Indian manufacture) via mask, intubated and connected to monitors such as a pulse oximeter and Doppler (these machines were brought with us, as the charity does not have any). The wounds were assessed, feathers plucked from around the area, any remaining kite strings removed and the area was flushed and prepared for surgery. Fluids were administered S/C or I/V and tramadol (Indian manufacture) was provided if a fracture repair was needed. As part of a protocol triage they had been given meloxicam, fluids and enrofloxacin 10% (all of Indian manufacture) before their anaesthesia. The most common injuries were cuts through the propatagium, and in worst cases muscles, ligaments and bone had been damaged or fractured (Figure 4). The propatagium (plural: patagia) is a membranous structure that assists an animal/bird in gliding or flight (Bennett & Baumgartner, 2012) (Figure 5). Once this is injured they are no longer able to soar at great heights; however, they can manage some flight (Forbes, 2016). Fractures were mainly repaired using external fixation comprising of methyl methacrylate and wire. As a last resort the wing was amputated; thankfully not many required amputations. One kite needed a fracture repair of the humerus via

an intramedullary (IM) pin. This was a last resort, as IM repairs in birds have a high risk of failure because large pneumatized bones often lead to emphysema (Harcourt-Brown, 2005), but it was the only option in this case. The veterinary surgeons had a huge and difficult case volume and access to limited resources.

After the surgery the wing was bandaged with a low-adherent absorbent dressing padded bandage and a cohesive bandage as a figure of eight dressing, to support the wing and cover the surgical wound (Figure 6). Once the birds had recovered

sufficiently from the anaesthetic, they were wrapped in a towel, placed in a dark cardboard box and taken to the ICU unit (Figure 7). Here another team would monitor the bird's complete recovery, finally placing them in cages individually. Over the next 7–10 days the birds would be fed, initially via tube, and the dressings changed and surgical wounds monitored. Prior to release the birds were taken to a large aviary out of town to enable flight and gain strength, and eventually a release site out of town. I was very privileged to take part in a release at a specially selected site on the outskirts of Ahmadabad



▲ Figure 6. Example of wing bandage on recovering ibis.



▲ Figure 7. Recovering black kites in ICU.



▲ Figure 8. Black kite release.

(Figure 8). It was a beautiful and fitting end to my time at Jivdaya Charitable Trust in India.

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Disclosure statement

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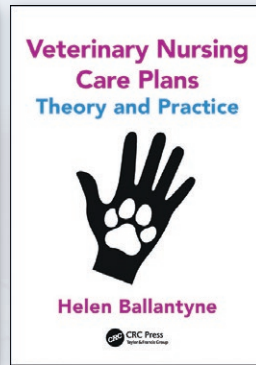
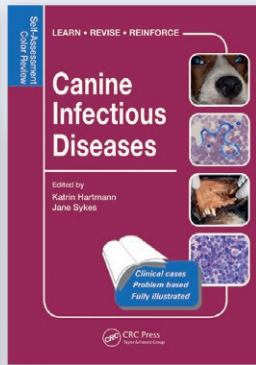
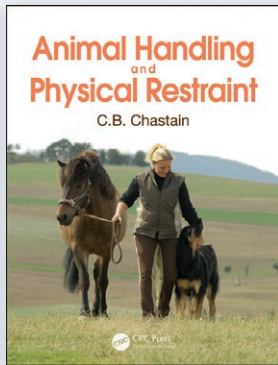
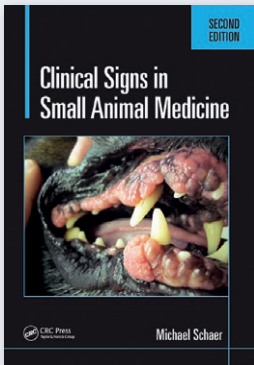
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