



Pathology/Biology Section - 2016

H50 Pack Mentality: Fatal Mauling in the African Painted Dogs' Zoo Exhibit

Farshaad Bilimoria, MD, 10 Allegheny Center, Apt 224, Pittsburgh, PA 15212; Stacey L. Reed, DO, 9500 Babcock Boulevard, Apt 54, Allison Park, PA 15101; Jessica B. Dwyer, MD, Allegheny County Medical Examiner's Office, 1520 Penn Avenue, Pittsburgh, PA 15222; Joseph A. DelTondo, DO, West Virginia University, One Medical Center Drive, Dept of Pathology - PO Box 9203, Morgantown, WV 26506; Todd M. Luckasevic, DO, Allegheny County ME, 1520 Penn Avenue, Pittsburgh, PA 15222; and Karl E. Williams, MD, Allegheny County OME, 1520 Penn Avenue, Pittsburgh, PA 15222*

The goal of this presentation is to illustrate a rare and avoidable death involving a member of the public accidentally falling into a zoo exhibit housing a pack of endangered African painted dogs.

This presentation will impact the forensic science community by illustrating the injury patterns of a pack of wild hypercarnivorous dogs and the need for proper zoo barriers and safe viewing platforms.

African painted dogs (*Lycaon pictus*) are among the most critically endangered species with roughly 5,000 dogs currently remaining in the wild. These animals are nomadic hunters and require expansive home ranges. Their method of pack hunting involves exhausting prey through constant pursuit before tackling their target. In turn, pack hunting produces a unique pattern of injuries. The head, neck, and extremities display shallow lacerations and puncture wounds obtained during the chase, while the trunk displays traumatic evisceration from the actual feasting. This method is considered highly successful, with approximately 80% of hunts resulting in a kill. In addition, bite force studies have ranked the African painted dog bite as one of the strongest at 719 Pascal, second only to the grey wolf.

A local zoo housed a pack of 11 African painted dogs. The dogs had no direct human contact, and their training was limited to retreating to their kennels when a whistle was blown. A viewing platform above the pen allowed the general public to observe the dogs. The wooden platform had five sides with a four foot-high railing. The two posterior-lateral walls had acrylic glass barriers, the two anterior-lateral walls had chain-link fencing, and the anterior wall was left open.

This case involves a two-year-old male visiting the zoo with his family. The group entered the African painted dogs' viewing platform. The mother lifted the decedent so he could stand on the railing and lean against one of the acrylic glass barriers. Eventually, the mother brought the decedent to the anterior wall and placed him on the rail, assuming there was a acrylic glass barrier. Unfortunately, the mother let go, the decedent leaned forward as if to place his hands on acrylic glass, and fell forward 11'4", first onto a safety net and then into the dogs' pen. The decedent was witnessed standing up before immediately being attacked by the 11 dogs. A trainer responded to witnesses' screams and blew a whistle. Seven of the dogs ran back to their kennels. A zoo response team shot tranquilizer darts at the remaining dogs, scaring three additional dogs back to the kennels. Responding officers arrived and opened fire on the last dog, who remained by the decedent. Medical teams arrived and pronounced the decedent without resuscitation attempts.

As per the chief veterinarian of the zoo, the dogs were regularly fed within their individual kennels, except once a week when they were provided a deer carcass to consume as a pack. They were scheduled to have their weekly pack meal on the day the decedent visited, but had not yet received the meal.

Examination of the decedent's body showed numerous blunt and sharp force injuries. Over 220 contusions, abrasions, and lacerations were identified on the head, neck, trunk, and extremities. Multiple two-patterned puncture wounds were noted on the head and chest. No internal craniocervical trauma was noted. There were extensive defects of the skin, subcutaneous tissues, muscles, and bones of the trunk and thighs, as well as traumatic evisceration of all internal organs of the chest, abdomen, and pelvis. Field recovery produced a 30 gram portion of lung tissue, a 60 gram portion of liver, and two portions of intestine, measuring 180cm and 104cm each. Examination of the dog killed by the police showed blood on the face, teeth, and left front paw. Gunshot wounds were identified to the head, back, and right hind leg, with bullet fragments recovered from each location. Internal examination revealed the dog's esophagus and stomach to be empty.

Fatal attacks by animals held in captivity are rare and typically involve zoo employees or animal handlers. This case underscores the importance of facilities housing wild animals to develop safe viewing options for the general public and for the public to adhere to advertised safety procedures. The characteristic injuries documented in this witnessed attack will hopefully help the forensic community identify cases of unwitnessed pack attacks.

African Painted Dogs, Zoo, Mauling