

Drowning after a crocodile attack-A case report

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Introduction

Crocodile's attacks on humans are reported from a number of countries across the world namely Asia, Africa, Northern Australia, South America and Southern United States.¹ Crocodile attacks cause significant form of injuries and deaths on Sri Lankan communities who live near water bodies where dangerous species of crocodiles inhabitant. Although the forensic pathologists encounter deaths following crocodile bites on and off there is no national statistical numbers of deaths due to crocodile attacks in Sri Lanka.

The crocodile bite injuries are generally of a crushing and degloving of soft tissues in nature which ranges from multiple puncture wounds, avulsion of limbs, or complete traumatic disruption of the body with only incomplete remaining for examination.¹ Here we present a case of a decomposed body recovered from water with non-fatal puncture wounds following a crocodile bite.

Case report

A body of a 72-year-old man was recovered from the water 3 days after been missing. He was last seen alive washing his vegetable harvest on the bank of the river. His body was recovered about 1km away upstream from the place where he was last seen alive.

A medico legal autopsy with pre-autopsy radiographs of lower limbs, histopathology of internal organs, toxicology and diatom studies were performed. The body was in a moderate state of decomposition with generalized bloating, desquamation of the skin with degloving of the skin of foot and hand, and marbling which was observed on the upper part of the body. Face was bloated with eaten up eyelids and

a protruded tongue. Scrotal distension was evident. There were several punctured lacerations around the left foreleg. The injuries were circular and oval in shape with elevated abraded margins. Two punctured wound sizes 3x1cm and 2x1cm were on the front aspect of the knee and on the mid left foreleg with 12 cm in distance. The three lacerations which were on the back of the right leg were 2x1cm and were situated 3cm in distance. The injuries have penetrated into the underlying soft tissues but the underneath bones were intact.

Internal examination revealed distended, spongy and pale lungs. The stomach was filled with water. All the internal organs were intact and softened with putrefactive color changes. The histopathology of organs did not reveal pathology except the putrefactive changes. Diatom test and toxicological analysis was negative.



Fig. 1 The decomposed body at mortuary.



Fig. 2 punctured injuries with marginal abrasions on the back of left thigh

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Discussions

The most common injuries sustained in a crocodilian attack are series of soft tissue and bone injuries, most often of the extremities.² The crocodilian teeth are conical in shape and designed for penetration and holding due to weak mouth opening muscles causing deep punctured wounds.¹

The punctured wounds caused by crocodile bites has to be differentiated from the firearm injuries. The multiple punctured lacerations with marginal abrasion collar which was observed on the deceased were mimicking shot gun firearm injuries. But the absence of pellets on X-ray images was supportive of crocodile attack. Hence we were able to exclude firearm injuries. In the largest series of injuries inflicted by Nile crocodiles describes as legs and arms accounts for more than 80% of soft tissue injuries.³ On the deceased the penetrating laceration was seen in the foreleg which is compatible with the findings of other similar studies.

The causes of death in crocodile attacks is drowning or fatal mechanical injuries caused by the bites.⁴ The injuries observed on the deceased were not fatal. The pale distended lungs are characteristic features of drowning.⁵ Therefore drowning could be the cause of death. Positive diatom test is helpful in determining the cause of death as drowning even in advanced stage of decomposition and in skeletonized bodies.⁶ However, absence of diatoms does not rule out drowning which was in this case. The histopathology was negative except the pyrefactive changes which caused difficulty in reading and interpretation of the findings. Therefore drowning is the most possible cause of death. The victim may have been grabbed from the lower limb and was taken into deep water by the crocodile leading to drown.

Conclusion

This case report illustrates several medico legal issues of a decomposed body recovered from water where there are restrictions in investigations and interpretation of findings.

References

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