Prevalence of surgical affections with their clinical management in crocodiles (Crocodylus porosus) in Bangladesh

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Abstract

This study was conducted in the saltwater crocodile (Crocodylus porosus) for the occurrence of various surgical affections with their clinical management. During the period of January 2006 to June 2008, a total of 68 adult crocodiles were considered as reference population from the Reptiles Farm Ltd. at Bhaluka, Mymensingh. The occurrence of surgical affections of adult female (88.9%) was significantly \( P < 0.01 \) higher than male (11.1%). Prevalence of common surgical affections were wound: 72.2%, fibroma: 11.1% abscess: 5.6%, fracture: 5.6%, tail necrosis: 2.8%, myiasis: 2.8%. Wound was the highest among the affections. Among the identified wounds, biting wound was higher. In summer (57.7%) the occurrence of wound was higher compared to other seasons. In winter season (7.7%) the occurrence of abscess, myiasis, fibroma were higher compared to other seasons. Wounds and fibroma are the major surgical affections in salt water crocodile. The most common site of surgical affection was recorded in crocodile’s tail (30.6%). It was suggested that minimal stress, allowing constant and easy access to water, removal of roots of the tree in the basking land of crocodiles pen, basking land of the pen is better filling up by sand, clinical surgical managements are essential for better health and production.

Key words: Saltwater crocodile (Crocodylus porosus), Surgical affections, Clinical management

INTRODUCTION

Crocodiles are quite fascinating animals and the more that people know about them, the better they can understand them. Farming of crocodiles is a relatively new form of “wildlife entrepreneur development in Bangladesh”. It involves captive breeding and the raising of juveniles for the production of both skins and flesh. Hopefully, this appreciation will lead to rational decisions being made about their long-term conservation and management. The majorities of saltwater crocodiles are found throughout Africa and Asia especially in India and adjacent countries (Ortega and Romero, 2006). Three crocodile species naturally inhabitant in Bangladesh. The marsh crocodile has disappeared from the Sundarban a decade ago, but the last three or four live in a pond near Bagerhat not far from the Sundarban (Messel and Floris, 2002). Crocodiles are prone to injuries through intraspecies aggression in the wild and in captive and farming system. In juvenile farmed Nile crocodiles, aggression was related to body size, stocking density and food preference, and directed mainly by
larger towards smaller individuals (Van der Merwe and Kotze, 1993). Sexually mature crocodiles may fight for territory, the possession of a female or over a nesting site. Injuries sustained may be series of skin punctures, raking wounds across an area of the skin, deep gashes, amputation of toes, of part of the tail and even whole limbs. Part of the upper or lower jaw may be broken or severed and deep penetrating bite wounds may injure the internal organs, leading to further complication, e.g. intestinal occlusion or peritonitis (Schoeb, 1999). So a comprehensive study of their surgical affections is important. Therefore, the present study was carried out to find out the occurrences and the nature of surgical affections with various factors in the farm and animal level and to establish proper surgical procedure in crocodile.

**MATERIALS AND METHODS**

**Reference and target population**

The study was conducted on all crocodiles of the Reptiles Farm Ltd. at Bhaluka, Mymensingh during the period from January 2006 to June 2008. The farm contained 209 crocodiles. Among them, 68 were adult and 141 were young. There were no surgical affections found in the young. So, finally the adult crocodiles were used as reference population.

**Clinical management of various surgical affections in crocodiles**

**Restraining**

The sick crocodile was identified on the basis of their locomotion, feeding behaviour and hydrophobia. Then the sick one was driven on a suitable land on which we could examine and treat the reptile with ease. A snare of rope was passed along its jaw and passed down the throat with a knot was tightened and held strongly restricting the movement of the crocodile. Care had been taken to minimize stress on the crocodile while capturing.

**Removal of fibroma**

A tourniquet applied above the affected part. The stalk is hold by curved artery forceps and anchoring it with chromic catgut. A circumferential incision was made at the base of mass and excised it. Simple interrupted suture was used to close the skin. A gauze dressing covered by elastic adhesive tape was applied over the affected region, leaving the digits exposed.

**Evacuation of abscess**

After removal of the crust from the upper part of the abscess, the area was properly explored by the thumb forceps to make the opening of the abscess bigger, in order to remove the sero-fibrinous clear fluid. The abscess was thoroughly cleaned by the gauge soaked into povidone iodine.