



ISSN: 2456-2912
VET 2017; 2(5): 25-26
© 2017 VET
www.veterinarypaper.com
Received: 18-07-2017
Accepted: 20-08-2017

Joshi MM
PETS CLINIC & Emergency
Center, shop no1, gorai tulsi
CHS, plot no 84, gorai 2,
Borivali, Mumbai, Maharashtra,
India

Darji PP
PETS CLINIC & Emergency
Center, shop no1, gorai tulsi
CHS, plot no 84, gorai 2,
Borivali, Mumbai, Maharashtra,
India

Shell fracture repair in red eared slider (*Trachemys scripta Elegans*) using k-wire and cortical screws- a case report

Joshi MM and Darji PP

Abstract

A 3 year old female red eared slider (*Trachemys scripta elegans*) was presented with shell fracture in Pets Clinic. The terrapin was stabilized with fluids for 24 hours and then the procedure was conducted. The shell was fixed by using k-wire and cortical screws followed by post-operative course of cefotaxime and meloxicam.

Keywords: res, shell, fracture, wire

Introduction

Shell (carapace and plastron) injury is one of the most common problem in these types of pets, due to accidental fracture, fight between inmates of the aquarium, faulty handling etc. The shell injured turtles is very difficult to manage and repair to shell is time consuming and it required 1- 2 years (Pothiappan, P., *et al*). Highly evolved structure and behavioral defenses of chelonians pauses a challenge in evaluating and treating them medically (Jayasinghe, M.G.C.M., *et al*). Basically the turtles are kept in an aquatic area due to this management of shell injury is a major problem (Pothiappan, P., *et al*). In the following paper we discuss about the fixation of shell fracture by k-wire and cortical screws.

Clinical history & Observations

The 3 year old, female red eared slider terrapin weighing 990 gram was presented with a 2 inch fracture on cranial left marginal and costal carapace scute along with fractures on marginal, humeral and abdominal scutes of plastron. The fracture was caused due to trauma, as terrapin fell from the 4th floor of the building. On presentation female was active, with pink oral mucous membrane. No signs of significant blood loss or rupture of internal organs were observed.

Treatment and Discussion

The terrapin was stabilized with Ringer's lactate, on the day of presentation, 2% of body weight. The antibiotic and analgesic therapy was started on the day of presentation. After 24 hours of stabilizing the terrapin was preceded for the fracture fixation. The wound was cleaned by 2% chlorhexidine scrub and 70% ethyl alcohol. The terrapin was anesthetized by ketamine 20mg/kg i/m injection along with pre-anesthetics diazepam 0.5mg/kg i/m and butorphanol 0.2mg/kg i/m injections. The terrapin was anesthetized within 20 minutes of injection. The shell was punctured on the cranial nuchal scutes of carapace, for wiring with 0.5mm k wire. On the costal scute of carapace, 0.8mm cortical screws were fixed on either sides of the fracture and wire was locked into them. The fracture on the plastron wasn't deep and to avoid any serious damage to internal vital organs the fracture was sealed by Tegaderm™ Dressing 8582 Size 5 cm X 7 cm. The post-operative treatment included injection of cefotaxime @ 10mg/kg intraperitoneally for 10 days and meloxicam @ 0.2mg/kg intraperitoneally for 5 days. The terrapin was only allowed to enter shallow water only for feeding twice in a day. After every feed, the area around the screws was cleaned by providone iodine. Flushing the wound with 0.1% povidone iodine, act as a good antimicrobial action while

Correspondence

Joshi MM
PETS CLINIC & Emergency
Center, shop no1, gorai tulsi
CHS, plot no 84, gorai 2,
Borivali, Mumbai, Maharashtra,
India

enhancing the maintenance of tissue viability (Mitchell and Diaz, 2004) ^[3]. Use of permanent or semi-permanent sealants like epoxies, resins, glues, cements, acrylics as occlusive semi-permanent dressings of a carapace fracture was reported (Reiss, 1999) ^[4]. In the past, there have been many materials used to repair shell fractures. These include fibre glass, methyl methacrylate (Ben Otten pers comm), bone cement and dental acrylics (M Cannon). These products are chosen to provide stability and are suitable to adhere to the shell. However, there are disadvantages to their use, especially fiberglass. If the resin gets in between the bone ends, it stops healing. The application is strongly exothermic, thus potentially damaging exposed tissue. It does not provide for growth. Death of turtles following severe shell fractures could be due to pulmonary hemorrhage as it is a common sequel to shell fractures, because the lungs of turtles are located dorsally in the coelomic cavity (Wellehan and Gunkel, 2004) ^[6].

References

1. Norton TM. Chelonian Emergency and Critical Care. *Seminars in Avian and Exotic Pet Medicine*. 2005; 14(2):106-130
2. Vella D. Management of shell injuries in Australian freshwater turtles. *The Veterinarian*, 2008.
3. Mitchell MA, Diaz-Figueroa. Wound management in reptiles. *Vet. Clin. North Am. Exot. Anim. Pract.* 2004; 7(1):123-140.
4. Reiss A. Shell repair in tortoises and turtles. In *Wildlife in Australia. Healthcare and management*. PGFVS Proc. 1999; 327:110-111.
5. McCracken Husbandry H. *Disease in Captive Reptiles*. Pub Royal Melbourne Zoo, 37.
6. Wellehan JFX, Gunkel GI. Emergent Diseases in Reptiles. *Seminars in Avian and Exotic Pet Medicine*. 2004; 13(3):160-174.