

# Treatment of Septicaemic Cutaneous Ulcerative Disease in an Indian Flap Shell Turtle: A Case Report

Jafar Sab<sup>1\*</sup>, Niteesh Kumar<sup>1</sup>, Sateesh Ashok Golasangi<sup>2</sup>, Praveen Madugonda Kanteppa<sup>1</sup>, Rajeshwar Gangaram Bijurkar<sup>1</sup>

*Ind J Vet Sci and Biotech* (2025): 10.48165/ijvsbt.21.4.36

Slowly but surely, turtles have become the pet of choice for many, rising to popularity in recent years. Septicaemic Cutaneous Ulcerative Disease (SCUD) or Shell rot is a critical issue in aquatic turtles and some reptiles caused by a bacterial or fungal infection. This may occur due to lack of knowledge of housing, *i.e.*, keeping the turtles in dirty water or providing mouldy bedding and some environmental factors like high humidity and low temperatures are responsible for the occurrence of this disease (Lingayat *et al.*, 2022). If proper measures for the control of shell rot are not taken, it can cause rot through the bone and into the body cavity (Khan *et al.*, 2019). The Gram-negative bacteria that are normally present in the environment are the most common cause of bacterial infection (Kasim *et al.*, 2017). Affected turtles show clinical signs such as presence of white spots on shell and hyperaemia in early stages of the disease, later cutaneous ulceration and fibrin deposit on the shell can be seen (Fowler and Miller, 2008; Jadhav *et al.*, 2020). This documentation describes the successful treatment of septicaemic cutaneous ulcerative disease in an Indian flap shell turtle.

## CASE HISTORY AND OBSERVATIONS

A turtle weighing 1.5 kg was presented to referral hospital, Veterinary College, Nandinagar, Bidar (KVAFSU, India) with the chief complaint of decreased food intake, presence of white patches on shell and bloody discharge at the junction between body and the shell. On careful investigation, it was found that the turtle was completely kept in water without any exposure to sunlight. On physical examination there was presence of irregular white patches over the dorsal surface of the body, *i.e.*, carapace, peeling out of skin at bridge, the bridge area was erythematous and there was presence of bloody discharge (Fig. 1). A sterile swab was collected and inoculated on MacConkey agar, later stained with Gram staining revealed Gram-negative rods (Fig. 2). The sample then re-streaked on to the EMB agar revealed metallic sheen confirming *E. coli* organisms (Fig. 3). Based on the above clinical and cultural characteristic findings the turtle was diagnosed to have SCUD or Shell rot.

## TREATMENT AND DISCUSSION

The turtle was treated with syrup Metronidazole @ 50 mg/kg b.wt., P.O., BID for 10 days, and Enrofloxacin bath @ 5 mg/L

<sup>1</sup>Department of Veterinary Clinical Complex, Veterinary College, Nandinagar, Bidar-585226, KVAFSU, Karnataka, India

<sup>2</sup>Department of Veterinary Medicine, Veterinary College, Nandinagar, Bidar-585226, KVAFSU, Karnataka, India

**Corresponding Author:** Dr. Jafar Sab., Assistant Professor, Department of Veterinary Clinical Complex, Veterinary College, Nandinagar, Bidar-585226, KVAFSU, India. e-mail: Jafarsab5@gmail.com

**How to cite this article:** Jafar, S., Niteesh, K., Sateesh, A. G., Praveen, M. K., & Bijurkar, R. G. (2025). Treatment of Septicaemic Cutaneous Ulcerative Disease in an Indian Flap Shell Turtle: A Case Report. *Ind J Vet Sci and Biotech*, 21(4), 175-176.

**Source of support:** Nil

**Conflict of interest:** None

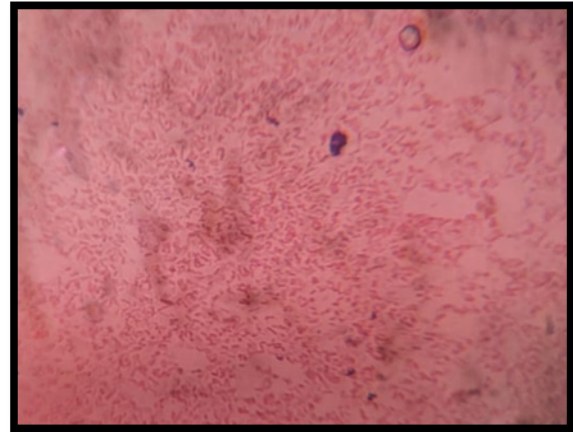
**Submitted** 25/02/2025 **Accepted** 31/03/2025 **Published** 10/07/2025

water, for 30 min daily for 10 days. Lotion Chlorhexidine 2%, was prescribed for external application and syrup Vetrivit turtle<sup>®</sup> (4 drops in 30 mL water) was given as vitamin supplementation and the owner was advised to provide dry area so that the animal can stay away from water for some time, and sun basking for about one hour daily for vitamin D synthesis. After 10 days of treatment the turtle recovered completely (Fig. 4).

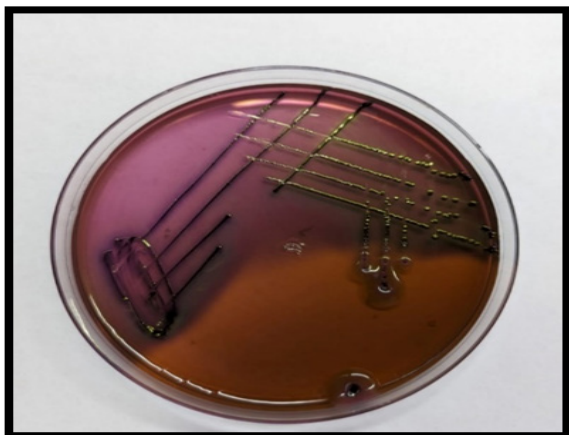
Shell is the primary defence of turtles against attack by predators or encounters with environmental stressors, hence managemental practices like keeping the turtle under fresh water (TDS of 50-100 mg/L) is important (Jadhav *et al.*, 2020). In this case study the turtle had clinical signs like presence of white patches on shell and bloody discharge at the junction between body and the shell. Similar findings were recorded by earlier workers also (Fowler and Miller, 2008; Jadhav *et al.*, 2020). On cultural examination presence of Gram-negative rods (*E. coli*) seen was in line with the findings recorded by Kasim *et al.* (2017) and Lingayat *et al.* (2022). Other treatment attempts for treating this condition are application of povidone-iodine-soaked gauze followed by application of silver sulfadiazine (Jadhav *et al.*, 2020). Khan *et al.* (2019) successfully treated shell rot in a turtle with enrofloxacin bath and topical application of chlorhexidine gel for 7 days, while Kasim *et al.* (2017) treated shell rot in a red-eared turtle with a combination of amikacin and metronidazole oral suspension for 10 days along with the topical application of diluted povidone-iodine for 14 days. Hoppmann and Barron (2007) recommended the treatment of affected turtle with



**Fig. 1:** Presence of white spots on shell and hyperaemia at bridge



**Fig. 2:** Gram's staining revealed Gram negative rods (*E. coli*)



**Fig. 3:** Culture on EMB agar showing metallic sheen



**Fig. 4:** Improvement in condition

2% chlorhexidine or povidone-iodine solution, twice daily soaks, until lesions resolved.

In summary, shell rot is a common bacterial infection of turtles. The occurrence of shell rot is primarily due to ineffective managemental practices like keeping the turtle in dirty water and insufficient exposure to sunlight. Antibiotic therapy along with topical antiseptics and oral vitamin supplementation is effective in eliminating the bacteria resulting in faster recovery of the animal.

### ACKNOWLEDGEMENT

Authors are thankful to Dean, Veterinary College, Nandinagar, Bidar for the facilities provided.

### REFERENCES

Fowler, M.E., & Miller, R.E. (2008). *Zoo and Wild Animal Medicine: Current Therapy*. Vol. 6. Elsevier Health Sciences.

- Hoppmann, E., & Barron, H.W. (2007). Dermatology in reptiles. *Journal of Exotic Pet Medicine*, 16(4), 210-224
- Jadhav, R.K., Chavhan, S.G., & Bhikane, A.U. (2020). Therapeutic management of shell rot in red-eared turtle (*Trachemys scripta elegans*) *Journal of Wildlife Research*, 8, 1-3.
- Kasim, A.M., Senthil Kumar, K., & Palanivelrajan, M. (2017). Shell rot infection in red eared turtle. *International Journal of Advanced Biological Research*, 7(3), 634-635.
- Khan, S., Satheesh, A., Panikkassery, S., & Sidhique, S.A. (2019). Therapeutic management of conjunctivitis and shell rot in a red-eared slider (*Trachemys scripta elegans*). *Journal of Dairy Veterinary and Animal Research*, 8(1), 22-24.
- Lingayat, S.S., Chaunde, D.S., Shafi, T.A., Sakhare, M.P., Siddiqui, M.F.M.F., & Syed, A.M. (2022). Shell rot infection in a red eared turtle. *Indian Journal of Veterinary Medicine*, 42(2), 116-118.