

CLINICAL MANAGEMENT OF *LANTANA* POISONING BY FEEDING BANANA STEM – A CASE REPORT

ARUKONTHAM DEEPIKA, AMBICA GADIGE*, SATISH KUMAR KARLAPUDI
and ANIL KUMAR BANOTHU

Department of Veterinary Medicine, P.V. Narsimha Rao Telangana Veterinary University,
College of Veterinary Science, Rajendranagar, Hyderabad- 500030, Telangana, India

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SUMMARY

A cross bred Ongole bull was presented with the history of ingestion of *Lantana camara* noxious weed and signs of photosensitization. Clinical examination revealed dermatitis along with alopecia and sloughing of skin at various parts including brisket region, peri-anal, nasal area and face. Skin scrapings tested was found negative for ectoparasites. Haemato-biochemical analysis revealed decreased levels of Hb, TEC and increased levels of PCV, TLC, ALT, ALP, Total bilirubin, creatinine and BUN levels than the normal values. The case was diagnosed as to be of photosensitization due to *lantana* poisoning. The bull was treated with supportive therapy along with the feeding of banana stem (*Musa balbisiana*) and found a significant improvement in the condition of the animal with symptoms receding and the animal gradually returning to the normalcy within 20 days after the treatment.

Keywords: *Lantana camara*, *Musa balbisiana* stem, Ongole cross bred bull, Photosensitization

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Toxic plants are of major concern to veterinarians because of their harmful effect to livestock in terms of causing mortality and reduction in productivity (Sharma *et al.*, 2007). Among the poisonous plants *Lantana camara* is one of the most commonly known noxious (Totland *et al.*, 2005 and Moura *et al.*, 2009). This weed is locally known as bunch berry, baraphulno, red or wild silage (Sharma *et al.*, 2007). Animals naturally avoid eating of poisonous plants unless there is scarcity of green fodder. The active substances causing toxicity in grazing animals are pentacyclic triterpenoids which inflict significant liver injury and photosensitivity. There is no specific antidote available against this plant (Sharma *et al.*, 2007). However, the activated charcoal, electrolyte and administration of laxative, antihistamine, liver supportive drugs and oral bile salt replacement from the exogenous source along with the provision of dark and cool place are advocated. *Musa balbisiana* a species of banana has been popular known for its antioxidant, hepatoprotective, antiurolithiatic and many other medicinal properties (Hemanta *et al.*, 2014). The innermost stem which is devoid of chlorophyll is used for curative therapy.

A four years old, cross bred Ongole bull was presented to the Veterinary Clinical Complex, College of Veterinary Science Rajendranagar, Hyderabad, with a history of loss of appetite and brittle skin. The owner reported that the animal has consumed *Lantana camara* while grazing in the field. Detailed clinical examination revealed fever (102.2° F), yellowish mucous membrane, photosensitization, dermatitis, alopecia (Fig. 1) and sloughing of the skin at various parts of the body including

perianal region, on face (Fig. 2), brisket region and on the legs (Fig. 3) with oozing of blood and sebum. Skin scrapings were collected and no ectoparasites were found. Haematological examination revealed decrease in haemoglobin (Hb=8g/dl), total erythrocytic count (TEC= $4.5 \times 10^6/\mu\text{L}$) and increase in Packed cell volume (PCV=50%) and total leucocytic count (TLC= $14.2 \times 10^6/\mu\text{L}$) indicating anemia, dehydration and infection.

Liver function test and kidney function test were conducted to evaluate the functioning of liver and kidney revealed increase in the ALT=70.3 IU/ μL values of total bilirubin=2.1 mg/dl, (Alanine transaminase), (Aspartate amino transferase) AST=220.3 IU/ μL , (Alkaline phosphatase) ALP=220.3 IU/ μL , (Biological urea nitrogen) BUN =41.26 mg and serum creatinine=4.0 mg % indicating extensive hepatic and renal damage.

On the basis of history of consuming *lantana* as told by owner and based on clinical and laboratory findings, the cow was diagnosed to suffer from hepatogenous photosensitization due to *Lantana camara*.

Bull received the therapy with normal saline solution infused intravenously @ 1000 ml I/V twice daily for 3 days for rehydration. Inj. Chlorophenaramine maleate @10 ml I/M was given for 5 days to reduce the skin irritation. A course of antibiotic Inj. Ceftriaxone plus tazobactam @20 mg/kg bwt I/M for 5 days to reduce the secondary bacterial infection, Inj. B-complex (Vitamin B1, B6 & B12 complex) @ 15 ml I/M for 5 days is given along with white ivory colored stem of *Musa balbisiana* (Fig. 4) obtained after the removal of few layers of base of leaves given as supportive therapy. These stem were cut

*Corresponding author: gadigeambica@gmail.com



Figs. 1-4. (1) Dermatitis and alopecia; (2) Sloughing of skin on the face; (3) Sloughing of skin on the legs; (4) Banana stem

into small pieces and given to the animal and allowed to eat ad libitum round the clock. The application of topical ointment (Charmyl ointment) was practiced twice daily on the affected areas for healing of the skin lesions. The owner was advised to keep the animal in the shadows and under stall feeding until the lesions subside. Within few days following the treatment, significant improvement was noticed and bull recovered within 20 days and regained its normal gesture and appetite. The post treatment values of kidney function test and liver function test were normal.

Recovery in the present case could be attributed to multiple therapeutic values of *Musa balbisiana* and supportive therapy. The juice of *Musa balbisiana* stem is already known as hepatoprotective and strong antioxidant properties (Kumar *et al.*, 2012) that stabilizes the free radicals released as a result of *Lantana camara* poisoning. The probable secondary bacterial infections can be well guarded with the antibacterial activity (Kumar *et al.*, 2012) of the juice of *Musa balbisiana* stem.

Hence, the inference can be drawn that the pseudo stem of *Musa balbisiana* can effectively be used as therapeutic and sole feed ingredient in *Lantana camara*

poisoning in cattle. However, the preventive measures are more effective than curative measures in *Lantana* toxicity.

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