



Treatment of Impaction of Digestive System in Ruminants by Tumba: A Clinical Report

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ABSTRACT

Background: The *Citrullus colocynthis* belongs to the Cucurbitaceae family. This plant is a perennial herbaceous creeping plant, with angular and rough stems. Cucurbits are known for their high protein and oil content. It has many common names including colocynth, bitter apple, bitter cucumber, desert gourd, egusi, vine of sodom, or wild gourd.

Methods: The research was conducted in the nal area of Bikaner district of Rajasthan state of India. The animals were mainly fed on dry roughages with limited access to green grasses. Fifteen animals (10 buffaloes and 5 cows) suffering from impaction were taken into study. The animals were having severe abdominal pain and consuming less water.

Result: On palpation of the para-lumbar fossa, there was low or absence of rumino-reticular movements. There was drop in fecal excretion in some animals while few had tight fecal material. Per-rectal examination of animals revealed tightness of the rumen and the rectum had few pellet like dry fecal material. The animals were administered with powdered form of the fruit and root of the *C. colocynthis* (Tumba) orally @25 gm/100 kg BW for five days. The animals were relieved of the impaction after 3-4 days of treatment.

Key words: Buffaloes, *Citrullus colocynthis*, Cows, Impaction.

INTRODUCTION

The *Citrullus colocynthis* belongs to the Cucurbitaceae family. This plant is a perennial herbaceous creeping plant, with angular and rough stems. Cucurbits are known for their high protein and oil content. It has many common names including colocynth, bitter apple, bitter cucumber, desert gourd, egusi, vine of Sodom, or wild gourd. The fruit of *Citrullus colocynthis* is commonly called Colocynth/ Bitter Apple in English, Hanjal in Urdu, Indrayan in Hindi, Kattu Kattuvellari in Malayalam, Anedri in Sanskrit, Rakhali in Bengali and Pcitummatti in Tamil In India and Pakistan, it is known as Tumba. *C. colocynthis* is a desert plant with a rich history as an important medicinal plant and its fruits were widely used medicinally, especially for stomach pains. The pulp is an effective hydragogue, cathartic and laxative because of its content of glucosides such as colocynthin.

MATERIALS AND METHODS

The study was conducted in Nal area of Bikaner district of Rajasthan where the animals are mainly fed on dry roughages with limited access to green grasses. Fifteen animals (10 buffaloes and 5 cows) suffering from impaction were taken into study. The animals were having severe abdominal pain and consuming less amount of water. On palpation of the para-lumbar fossa, there was low or absence of rumino-reticular movements. There was a drop in fecal excretion in some animals while few had tight fecal material. Per-rectal examination revealed tightness of the rumen. The rectum had few pellet like dry fecal material. The animals were administered with powdered form of the fruit and root of the *C. colocynthis* orally @ 25 gm/100 kg BW for five days.

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RESULTS AND DISCUSSION

In this work, we have worked on the therapeutic use of *Citrullus colocynthis* on the animals suffering from impaction of livestock holders of Nal area of Bikaner district of Rajasthan, India. The results revealed that the powder form of the root and fruit of the *Citrullus colocynthis* @ 25 gm/100 kg BW given orally for five days gave good results with regard to impaction of the animals and relieved them from this problem. After 3-4 days of consuming the powder the animals were relieved of the impaction. The powder had a purgative effect on the animals as also reported in humans by Mitaliya and Bhatt, 2003; Asyaz *et al.*, 2010; Jayaraman and Christina, 2013. The plant is known to be beneficial in multiple gut disorders such as indigestion, gastroenteritis, constipation and colic pain, while there is no study available on any gut disorders. It was observed that the plants with multiple indications of gut disorders usually contain combination of gut stimulants (mainly acetylcholine like) and spasmolytic (mainly Ca⁺⁺ antagonist like) constituents, which not only explain their medicinal use in constipation and colic pain/ diarrhea, but also offers side-effects neutralizing

potential, thus not allowing gut stimulant component to go beyond certain limit, above which it could have been harmful (Gilani and Atta-ur-Rahman, 2005).

Likewise there are many plants growing in the wild with diverse pharmacological action on many diseases. The ethno-veterinary (EV) investigations on many plants including *C. colocynthis* in Rajasthan were performed by different researchers. A brief account is given here-in-below. Singh and Pandey (1980) published a book on ethno-botany of Rajasthan and referred to *Citrullus colocynthis* plants utilized by the innate community of Rajasthan. Kumar (2000) examined on identification and documentation of *Citrullus colocynthis* plants utilized by sheep ranchers in Rajasthan. Katewa and Choudhary (2000) made ethno- veterinary study of *Citrullus colocynthis* plants in Rajsamand district. Jain *et al.* (2005) reported some phyto-therapeutic claims by tribes of southern Rajasthan and reported 20 restorative plants including *Citrullus colocynthis* having a place with 15 families. Katewa and Galav (2005) detailed conventional herbal medications using *Citrullus colocynthis* from the Shekhawati area of Rajasthan for different infirmities, for example, skin sexual, stomach related and respiratory-related issues.

CONCLUSION

Therefore, it may be concluded that, in human medicine, we are fore-most and have gained access to these plants and their value to cure many diseases. In veterinary medicine, we are still lacking in many areas of treatment. So the need of the hour is to cure the diseases of the animals by ethno-veterinary practice as, we have used the English drugs for centuries, with which an era has come of anti-microbial resistance.

Conflict of interest: None.

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