Available online at www.pelagiaresearchlibrary.com

Pelagia Research Library

European Journal of Experimental Biology, 2015, 5(10):24-25

ISSN: 2248 –9215
CODEN (USA): EJEBAU

A field study on serum calcium and phosphorus in calcium cyclers and its treatment in cattle

Umadevi U.[1], Madhu Mathi P.[2] and Umakanthan T.*

[1]*Dept. of Botany with Biotechnology, Standard Fireworks Rajarathinam College for Women, Sivakasi, Virudhunagar Dt, Tamilnadu, India*
[2]*Veterinary Practitioner, V. P. Palayam (P.O), Unjalur (via), Erode Dt, Tamilnadu, India*
**Veterinary Surgeon, Veterinary hospital, Satur, Virudhunagar Dt, Tamilnadu, India-*

ABSTRACT

Recently calved 5 cows and 3 buffaloes, which are found to be calcium cyclers, were studied. Serum analysis showed decreases calcium level but phosphorus level within normal reference values. All the animals were successfully treated with 350-450 milliliter of intravenous calcium boro-gluconate, except the one cow which has elevated prolactin level.

Keywords: calcium cyclers, Ca: P ratio, calcium boro-gluconate

---

INTRODUCTION

In the first few weeks of lactation, fluctuations in the intestinal calcium absorption cause subclinical hypocalcaemia which is of major significance[1].

Usually in the field, farmers and veterinarians carefully observe even the earlier stage than the first stage of milk fever, though perplexing in clinical diagnosis of 'calcium cyclers'. This paper reports serum calcium and phosphorus estimation in calcium cyclers and its treatment.

In one month study such five cows and three buffaloes were recorded. History revealed the calving rangedbefore10 days to 3.5 months, reduced feed intake or anorexia, suspended rumination and reduction in milk yield ranged between 1 to 8 lts. Two animals had treatment for hypogalactia 3 days back. Clinical examination revealed temp of 37.5-39.0^{o}C, pale pink mucous membrane, normal locomotion, alert, normal to scanty dung and reduced ruminal motility.

Serum calcium and phosphorus estimation in cows ranged between 6.3-9.9 milligrams % and 4.2-7.8milli grams % respectively, in buffaloes 7-10milligrams % and 3.6-5.9milligrams % respectively. All the animals were treated with 350-450milliliter of calcium boro gluconate (Calboral-Novartis) intravenously immediately after the receipt of laboratory result. In 12-36 hrs all the animals recovered completely except one cow, for which serum prolactin was 71.25nano grams per milliliter and didn't respond to any therapy. The normal serum Ca:P ratio is 2.58:1. In this study though calcium level is altered the phosphorus level remained same which needs further study.

Acknowledgement
The authors thankfully acknowledge the valuable help of field veterinarians, cattle owners and Mr. Ayyavu, Chief technician, Mullai clinical laboratory, Cumbum for various valuable help.

REFERENCES

[1] Radostits O.M, Blood D.C and Gay C.C; Veterinary Medicine.8th edn, Bailliere Tindall, London, **1994**. p1315, 1318