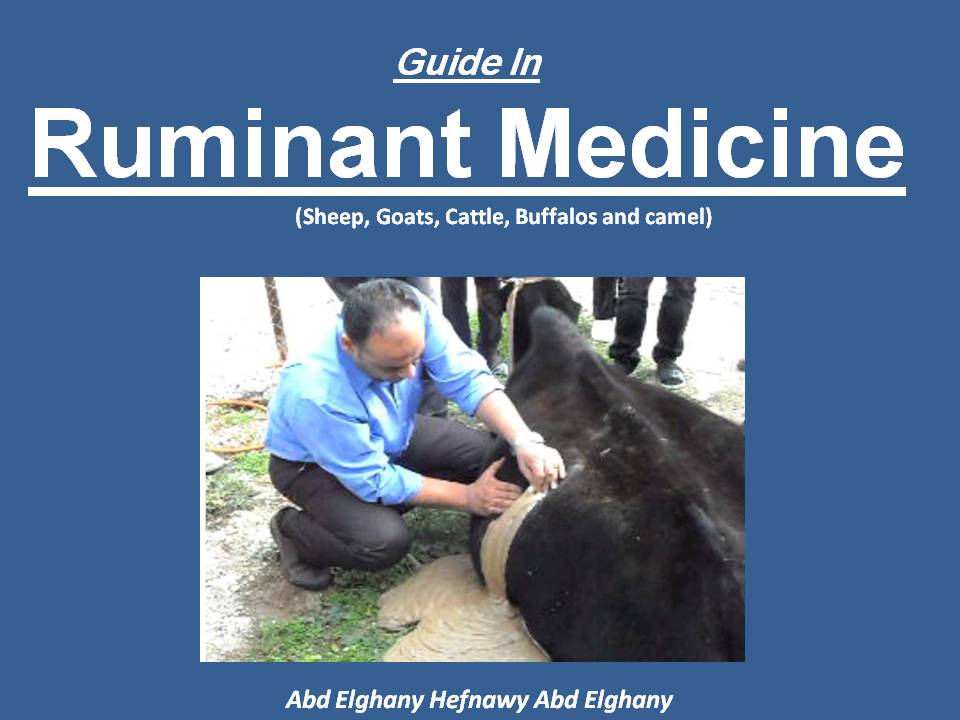
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List of abbreviations

|  |  |
| --- | --- |
| ACTH | Adrenocorticotrophic hormone |
| ADH | Antidiuretic hormone |
| ALT | Alanine aminotransferase |
|  |  |
| AST | Aspartate aminotransferase |
| bpm | Beats per minute |
|  |  |
|  |  |
|  |  |
|  |  |
| Bl | Blood |
| Ca | Calcium |
|  |  |
| CHF | Congestive heart failure |
|  |  |
| CNS | Central nervous system |
| CPK | Creatine phosphokinase |
| CSF | Cerebrospinal fluid |
| CT | Connective tissue |
| Cu | Copper |
| DCT | Distilled convoluted tubules |
| DHCC | Dihydroxycholecalciferol |
| DIC | Disseminated intravascular coagulation |
| DLC | Differential leucocytic count |
| DM | Dry matter |
| DRS | Dorasal ruminal sac |
| ECF | Extracellular fluid |
| ECG | Electrocardiography |
| FMD | Foot and mouth disease |
| GCB | Grain concentrate bloat |
| GGT | Gamma Glutamyltransferase |
| GIT | Gastrointestinal tract |
| GLB | Grain legume bloat |
| GOT | Glutamate amino transferase |
| GSH-Px | Glutathion peroxidase |
| H+ | Hydrogen ion |
| HES | Hydroxy ethyle starch |
| H2O2 | Hydrogen peroxide |
| Hb | Hemoglobin |
| HC | Hypocalcaemia |
| HCO3- | Bicarbonate |
| HLB | Hay legume bloat |
| HM | Hypomagnesaemia |
| Hr | Hour |
| ICF | Intracellular fluid |
| IL | Interleukin |
| IM | Intramuscular |
| IU | International unite |
| IV | Intravenous |
| JVP | Jagular vein pulsation |
| LA | Long acting |
| LN | Lymph node |
| Mg | Magnesium |
| N | Normal |
| NH4+ | Ammonia |
| NMD | Nutritional muscular dystrophy |
| OPT | Ovine pregnancy toxemia |
| PCo2 | Partial pressure of carbon dioxide |
| PCT | Proximal convoluted tubules |
| PCV | Packed cell volume |
| PD | Periodental disease |
| ppm | Parte per million |
| PTR | Pulse,temperatura and respiration |
| RBCs | Red blood corpuscles |
| SC | Subcutaneous |
| Se | Selenium |
| SG | Salivary gland |
| Se RU | Selenium responsive unthriftness |
| VFA | Volatile fatty acid |
| Vit | Vitamin |
|  |  |
|  |  |
| T3 | Triiodotyrosine |
| T4 | Tetraiodtyrosine |
| TB | Tuberculosis |
| TLC | Total leucocytic count |
| TNF | Tumor necrosis factor |
| TPP | Thiamin pyrophosphate |
| VDI | Veterinary drug index |
| VRS | Ventral ruminal sac |
| WLD | White liver disease |
| WMD | White muscle disease |
| Ws | Weeks |

Introduction

**Ruminant medicine is one of the most important branch in the veterinary medicine as the ruminant animals play an important role in the animal production and in the economic state of the country, so diseases that affecting the ruminant have great effect on the animal production as well as in the economic state of the country .**

**In this book (Guide In Ruminant Medicine ) we try to highlight on the most important medicinal problems which can occur in the ruminant and affect on the general health and productivities of the ruminant with explanation of the main etiological and predisposing factors of the diseases as well as pathogenesis, clinical forms, methods of diagnosis and the main lines of treatment and control of the most important medicinal diseases that affecting sheep, goat, cattle, buffalos, and camel.**

**This book consists of main six parts, (I)Small Ruminant Medicine ( sheep and goat), (II) Large Ruminant Medicine (cattle and buffalo) , (III) Some of general systemic and toxic diseases (IV) Practical ruminant medicine (V) Camel Medicine and (VI) MCQ and study questions with appendix including glossary of the most common veterinary terminology, veterinary drug index, normal physiological parameters and normal laboratory values of ruminants.**

We try in this book to be suitable for the students of the facilities of veterinary medicine, veterinarians as well as the students of the postgraduate studies.

Abd Elghany Hefnawy Abd Elghany

Dedication

I would like to thank all the members of my family, my father, my mother, my brothers and sisters as well as my family, my daughters Rewaa and Noran and my sons Karim, Basel, Mazen and Serag for their Permanente support and patient until completing this work. Also I would like to thank Mr. Samuel Gomez and his wife Esther Selene and their daughter Cesia for their support to me until completing this work in Mexico.