

## THERAPEUTIC PROTOCOL OF REDUCED IMPACT ON THE WELFARE OF NATURALLY SICK BOVINE

### PROTOCOLO TERAPÊUTICO DE REDUZIDO IMPACTO NO BEM-ESTAR DE BOVINOS NATURALMENTE ENFERMOS

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The Veterinary Hospital (HV) of Universidade Estadual de Londrina (UEL) has been a reference center in pet therapeutic and diagnosis since 1971. Its operating area includes 73 counties, with an expressive number of clinical cases with different species. It operates uninterruptedly, with professionals on call 24 hours a day. HV also offers teachers and undergraduate and graduate students the opportunity to work with a great range of sick animals with distinct pathologies and different organic systems. In addition, assistance is offered in the field, in a mobile fashion, in order to treat sick bovine faster during their convalescence. Based on this demand and on the principles of animal well-being, a therapeutic procedure of reduced impact on the reactive behavior of bovine was developed five years ago, to minimize stress. Two techniques are routinely carried out in bovine general practice. The first one refers to a protocol to combat parasite. With modern commercial formulations, only the pour on version is used to combat ticks, larvae and worms. Students are trained in the standard application which approaches the bovine from the left side, with the product flowing from left to right. This allows a uniform distribution of the product, with dexterity and management skills by making better use of the motor function and graphology characteristic of each individual. This technique was used to medicate 102 adults and remaining weaned calves. The methodology took into consideration the animals' weight to calculate the dosage to be applied, on rainy days. Average time spent on each application was 2.04 minutes. The second technique is the intraperitoneal fluid therapy. Access is done from the bovine's right side, using a specific needle coupled to the infusion equipment after a correct local asepsis. The needle is placed in the middle of the paralumbar fossa, with an insertion in a 90° angle in relation to the soil, crossing the skin, the subcutaneous and three muscle layers and arriving at the abdominal cavity. Through this route, it is possible to carry great volume of aqueous solutions, safely and in a short period of time. The advantage of this procedure over the intravenous route is that the animal does not feel threatened and does not notice the veterinarian performing the application since he/she is out of the bovine's sight, behind the equilibrium point line. In addition, through the intraperitoneal route, the flow is continuous with excellent absorption and little diuresis in relation to the intravenous application. Infusions were carried out with different crystalloid solutions in volumes that varied from 2 to 5 liters in cows plus vitamin complexes (40 ml), hepatic protectors (100 ml), calcium borogluconate (100 ml), glyucose 50% (50 ml) and sodium iodide (20 ml). The technique was used with 232 adult bovine and the average time for each litter injected was of 20.24 minutes. Animal responses to the treatments were analyzed for both techniques to detect any semiological alteration and monitored through clinical and behavioral observation plus pulmonary and cardiac auscultation. In both techniques, the larger scope was to train students on techniques which do not promote significant interferences in the animal's welfare during therapeutic procedures, with less impact on bovine behavior.

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