Research Paper

Adverse Effects of Chemotherapy in Dogs.

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ABSTRACT

Owners of dogs with cancer are often offered chemotherapeutic treatment. However, clients who seek veterinary care for pets with cancer are often concerned about the potential negative impact of chemotherapeutic treatments on their animals’ quality of life. The purpose of this retrospective case series was to investigate the delayed acute effects of chemotherapy drugs in dogs receiving cancer treatment and their owners’ opinions regarding chemotherapy acceptance by their pet. In this study, 292 dogs that were treated with chemotherapy as a definitive and/or adjuvant treatment for cancer. Medical records were reviewed to determine the chemotherapy agent used and if they had any delayed adverse effects or not. Side effects were classified according to VCOG-CTCAE grading of adverse effect severity veterinary co-operative oncology group. Lomustine, carboplatin, vincristine, doxorubicin, cyclophosphamide, mitoxantrone, and vinblastine were administered in 16%, 20%, 15%, 18%, 16%, 8%, and 7% of the cases respectively. The most common adverse effects were neutropenia (22%), vomiting (21%), diarrhea (20%) and inappetence (20%). Cyclophosphamide and vincristine were the agents that had caused more adverse gastrointestinal effects, while lomustine was the drug that had caused more hematologic effects. In some dogs receiving lomustine and carboplatin, neutropenia (some of them severe) had occurred as early as in the sixth day. According to the current grading system of adverse effects induced by chemotherapy, general tolerance to chemotherapy is referred to as grade 1, which was observed in 83% of the cases. Owner opinion was positive in most cases, and 77% of the owners had evaluated that the treatment was well tolerated by their dogs. In contrast, 8% of the treatments were poorly tolerated and they had negatively impacted the affected dogs’ quality of life. Based on the data examined, we would recommend that gastrointestinal adverse effects must be prevented with antiemetic medication, especially in dogs receiving cyclophosphamide, vincristine, carboplatin and doxorubicin. Hematologic profile must be performed as early as in the 6-7th day after lomustine and carboplatin, as severe neutropenia can occur. Adverse chemotherapy effects may occur in about 20-25% of canine patients.

Key words: Canine, Oncology, Chemotherapy, Side effect, Tolerability
This study aimed to investigate the efficiency of mechanical and enzymatic elimination of semen viscosity in adult dromedary camel bulls' semen on cryopreservation potential of spermatozoa. Conversely, the study recorded the lowest significant values for LIN, 5.03±1.05%. The researcher examined three different treatments for viscosity elimination; namely; Amylase Enzymatic Treatment (AET), Syringe Mechanical Treatment (SMT) and Amylase Syringe Mixed Treatment (ASMT). The results revealed that, a significant deleterious influence of enzymatic and mechanical liquefaction of seminal plasma on freezability of STR and WOB in the SMT. These results clarified that both enzymatic and mechanical methods were significantly varying in the mean values of sperm kinetics (DCL, DAP, VAP, VSL), except for DSL, VCL that showed highest significant differences. The test results also showed the same trend for first and second abnormalities.

Influence of Enzymatic and Mechanical Liquefaction of Seminal Plasma on Freezability of Spermatozoa in the SMT. The results showed that the mean values for initial motility were significantly (P < 0.05) varying for different treatments, while the values for post-thawing motility were not significantly (P > 0.05) vary with age groups of the animals. This study demonstrated the prevalence of bovine tuberculosis in cattle at the ELFORA export abattoir in Debre-Zeit in the period from November 2014 to April 2015. Members of the Mycobacterium complex group cause tuberculosis, it is recognized as one of the major causes of death in humans and livestock in the world. It is estimated that 3 billion people worldwide are infected with tuberculosis. The World Health Organization estimated that 9.4 million people were infected with tuberculosis in 2014 and 1.5 million people died from tuberculosis.

The purpose of this study was to evaluate the haematological and biochemical changes in Nigerian dogs with short bowel syndrome. Thirty adult dogs each weighing approximately 12.4kg (range 7-18kg) were used in this study. The dogs were randomized into five groups of six dogs each. Group 1 is the control group. The dogs here were not placed on any treatment. Group 2 dogs were supplemented with glutamine. Group 3 dogs were supplemented with ascorbic acid and group 5 dogs were supplemented with glutamine, honey and ascorbic acid combination. Haematological and biochemical parameters were evaluated. There was no depletion in sodium, potassium, bicarbonate and chloride in all the groups. There was a significant decrease in the value of alkaline phosphatase in the five groups and the alanine aminotransferase and aspartate aminotransferase were also decreased significantly.

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