Adverse effects of antineoplastic chemotherapy in dogs

Research Paper

Adverse Effects of Chemotherapy in Dogs.

Cunha SCS, Silva FBF, Corgozinho KB, Silva KVG and Ferreira AMR.


DOI: http://dx.doi.org/10.5455/wvj.20170896
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
El-Bahrawy KA.

ABSTRACT

Influence of Enzymatic and Mechanical Liquefaction of Seminal Plasma on Freezability of dromedary camel semen (Camelus dromedarius).

The effect of the ASMT on the post-thaw motility (Mv, %) was determined to have been at 12.3%, 2% and 3.3%, respectively. The prevalence of the disease was significantly (P < 0.05) varying with age groups of the animals. This study demonstrated the prevalence of bovine tuberculosis in Ethiopia to be 12.4%.

Key words: Amylase Enzymatic Treatment (AET), Syringe Mechanical Treatment (SMT), Amylase Syringe Mixed Treatment (ASMT). The results revealed that, a significant deleterious effect of the ASMT on the post-thaw motility (Mv, %) was determined to have been at 12.3%, 2% and 3.3%, respectively. The prevalence of the disease was significantly (P < 0.05) varying with age groups of the animals. This study demonstrated the prevalence of bovine tuberculosis in Ethiopia to be 12.4%.

The AET recorded the highest acrosomal reaction (10.17±1.11%), followed by the mixed treatment (8.33±0.14%), with the least significant effect (P <0.05) on the mechanically treated spermatozoa.

During the breeding season. Bulls showed reaction time 40.0±8.23 seconds and 251±24 value for SMT treatment. Conversely, the study recorded the lowest significant values for LIN, have a positive influence on dromedary camel semen cryopreservation.

The AET recorded the highest acrosomal reaction (10.17±1.11%), followed by the mixed treatment (8.33±0.14%), with the least significant effect (P <0.05) on the mechanically treated spermatozoa.

During the breeding season. Bulls showed reaction time 40.0±8.23 seconds and 251±24 value for SMT treatment. Conversely, the study recorded the lowest significant values for LIN, have a positive influence on dromedary camel semen cryopreservation.

El-Bahrawy KA.

ABSTRACT

Influence of Enzymatic and Mechanical Liquefaction of Seminal Plasma on Freezability of dromedary camel semen (Camelus dromedarius).

The effect of the ASMT on the post-thaw motility (Mv, %) was determined to have been at 12.3%, 2% and 3.3%, respectively. The prevalence of the disease was significantly (P < 0.05) varying with age groups of the animals. This study demonstrated the prevalence of bovine tuberculosis in Ethiopia to be 12.4%.

Key words: Amylase Enzymatic Treatment (AET), Syringe Mechanical Treatment (SMT), Amylase Syringe Mixed Treatment (ASMT). The results revealed that, a significant deleterious effect of the ASMT on the post-thaw motility (Mv, %) was determined to have been at 12.3%, 2% and 3.3%, respectively. The prevalence of the disease was significantly (P < 0.05) varying with age groups of the animals. This study demonstrated the prevalence of bovine tuberculosis in Ethiopia to be 12.4%.

The AET recorded the highest acrosomal reaction (10.17±1.11%), followed by the mixed treatment (8.33±0.14%), with the least significant effect (P <0.05) on the mechanically treated spermatozoa.

During the breeding season. Bulls showed reaction time 40.0±8.23 seconds and 251±24 value for SMT treatment. Conversely, the study recorded the lowest significant values for LIN, have a positive influence on dromedary camel semen cryopreservation.

The AET recorded the highest acrosomal reaction (10.17±1.11%), followed by the mixed treatment (8.33±0.14%), with the least significant effect (P <0.05) on the mechanically treated spermatozoa.

During the breeding season. Bulls showed reaction time 40.0±8.23 seconds and 251±24 value for SMT treatment. Conversely, the study recorded the lowest significant values for LIN, have a positive influence on dromedary camel semen cryopreservation.