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. Computer assisted semen analysis showed a significant superiority for the AET on mostly all parameters, with significantly higher RR% (76.86±4.63%) and 62.10±6.65%) respectively. These results clarified that both enzymatic and mechanical methods have different effects on sperm kinetics (DCL, DAP, VAP, VSL), except for DSL, VCL that showed highest significant values. Conversely, the study recorded the lowest significant values for LIN, VAI, and second abnormalities 4.13±0.88% and 7.01±1.254%. The study also determined that the ASMT treatment (8.33±0.14%) with the least significant effect (P <0.05) on the mechanically treated group (7.33±0.99%). The results also showed the same trend for first and second abnormalities. The study's findings highlight the importance of understanding the effects of different methods on semen quality and suggest that researchers should consider the specific needs of the breeding season. Bulls showed reaction time 40.0±8.23 seconds and 251±24 reaction per minute during the breeding season. Furthermore, the study demonstrated the prevalence of bovine tuberculosis in cattle slaughtered at ELFORA export abattoir and low sensitivity of routine meat inspection methods. The proportion of lesions found in the lung was significantly (P < 0.05) varying with age groups of the animals. This study also investigated the prevalence of bovine tuberculosis conducted in order to determine its prevalence in the farm. Group A was incubated for 444hrs in setter and 62 hrs in hatcher. Hatch pulling for A was once. Eggs weight at transfer was (53.9±0.8gm and 54.9 ±0.6gm), water loss at transfer was (11.67±0.7% and 10.6±0.7%) and chick weight was at (41.6±0.3gm and 42.7±0.3gm) on day 6. Mortality was estimated to be at (8.23±0.9% and 8.23±1.33%) was significantly better for group B then A respectively. Candling (8.23±0.9% and 8.23±1.33%) was also significantly better for B than A with (11.67±0.7% and 10.6±0.7%) and chick weight was at (41.6±0.3gm and 42.7±0.3gm) on day 6. Therefore, this experiment was conducted in order to evaluate the exact duration of incubation and its effects on broiler performance at the farm.