

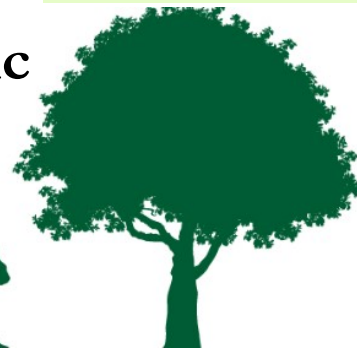
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Damory Veterinary Clinic

Small Animal Factsheet



Chemotherapy Drugs – Usage and Safety for Patient and Owner

Introduction

Whilst surgery still represents the treatment of choice for most tumours seen in veterinary medicine some tumours, notably lymphoma and leukaemias, are generally not amenable to surgical treatment and can only be managed with medication (chemotherapy). Other types of cancer may benefit from follow up medical management, after an initial surgical procedure. The term chemotherapy carries a huge weight of expectation regarding side effects and many people are put off treating animals through experience of people undergoing chemotherapy.

Generally speaking the drugs used to treat cancer in veterinary medicine are well tolerated and many people would testify to the improved quality and length of life that such drugs have given to their pets. As a rule chemotherapy tends to be less aggressive in animals than people and side effects such as hair loss are seldom, if ever, seen. However it is important that potential side effects of drugs are appreciated and also that appropriate measures are taken for safe handling of drugs and waste products (urine/faeces) from animals that have recently been under treatment.

The following aims to summarise the common drugs used and their safety profiles. This is not an exhaustive list but covers the most common side effects seen.

General

The aim of chemotherapy drugs is to kill cells that are dividing rapidly (i.e. cancer cells). In the normal body certain tissues are also rapidly producing new cells. These include sex organs, gut lining and bone marrow. The main concern in veterinary medicine for most chemotherapy drugs is the effect on bone marrow and the reduction in production of white blood cells and platelets. Blood tests taken whilst undergoing chemotherapy ensure that the white cell and platelet counts remain within normal limits. If white cell counts fall too low then there is an increased susceptibility to infection and if platelet counts fall too low there is an increased susceptibility to spontaneous bleeding.

Specific Drugs

Prednisolone

- This is a commonly used drug for many conditions. Generally it is used at higher doses for treating cancers. It is usually well tolerated and the main side effects seen will be increased thirst and increased appetite (which is often desirable)

Cyclophosphamide

- One relatively common side effect of cyclophosphamide (*Endoxana*®) is the development of cystitis. This can be monitored with regular urine samples. It often takes some time (usually > 6 months) for this symptom to develop and sometimes the vet will change this medication for another after 6 months in order to prevent the development of cystitis. Occasionally the drug causes vomiting and diarrhoea and more rarely still is toxic to the liver and kidneys.

Handling - **Gloves should be worn to handle this drug**
- **Tablets must not be crushed or split**
- **if high doses are being used then care should be taken to minimise contact with bodily fluids (urine/saliva) for the next 3-4 days. As a precaution, even on low dose regimes, contact with urine should be minimised (i.e. wear gloves if need to clear up urine)**

Chlorambucil - This drug (*Leukeran*®) is similar to cyclophosphamide in its mode of action and is often used as a replacement if signs of cystitis are seen. It is also used quite commonly in cats with lymphoma. **The side effects of the drug are similar to cyclophosphamide and handling advice is the same.**

Vincristine - This drug is given intravenously in the surgery. The main complication with administration of this drug is leakage of the drug around the vein, where it can cause severe irritation. Therefore, the drug is always given with great care via an intravenous canula. Very rare side effects include nerve weakness and constipation.

Vinblastine - This is a similar drug to vincristine but tends to cause more profound bone marrow suppression than vincristine. It is given intravenously and is occasionally used as a follow up for treating mast cell tumours.

Doxorubicin - This drug is also given in the surgery and is given by slow intravenous injection via a drip line. This is a more potent drug and, as such, has the potential for more side effects. However, it also has the potential to give longer survival times as a result of this. One side effect specific to this drug relates to rhythm and contraction disturbances in the heart so this drug must be avoided if there is any underlying heart problem. Vomiting and diarrhoea are occasionally seen and the drug may have toxic effects relating to the kidneys. As this drug has potentially more side effects we usually have to carry out more monitoring during treatment protocols involving this.

From time to time other drugs will be recommended and their effects/side effects will be discussed on an individual case basis.

We recommend whilst your pet is on chemotherapy that either you double bag your dog's faeces to dispose of it or that you flush it down your toilet.

In summary, whilst great care must be taken in using these drugs and whilst potential side effects must be appreciated, many people have extremely rewarding experiences with treating their animals. The key issue with animals is that welfare and quality of life must come first. If either the underlying condition is too difficult to control or the side-effects of treatment are unacceptable we would not hesitate to recommend putting the animal to sleep as a kinder option.