

CYTARABINE (CYTOSINE ARABINOSIDE) CHEMOTHERAPY



What is Cytosine Arabinoside?

Cytosine arabinoside (CA) – also known as cytarabine, is a chemotherapy drug used in animals for the treatment of cancers such as leukaemia and lymphoma (blood cancers) and more. In dogs, it has also been shown to be helpful for the treatment of autoimmune disease e.g. granulomatous meningoencephalitis (GME) and inflammatory meningitis, when corticosteroids (steroids), the first line of therapy, fail. GME and autoimmune meningitis result from an abnormal increase of inflammatory cells. CA works by hindering DNA synthesis in cells, particularly in those cells that are rapidly dividing.

Why we use Cytosine Arabinoside?

In drug trials, CA shows great control of immune mediated disease and few long-term side effects, when compared to treatment with corticosteroids.

When to give Cytosine Arabinoside?

If your pet has been diagnosed with inflammation of the central nervous system or lymphoma (cancer of the immune system), though further specific tests should be performed before starting treatment with CA. These tests include an MRI scan and a spinal tap (sample of cerebrospinal fluid).

How is Cytosine Arabinoside given?

CA is available only as an injectable drug for your pet. Injections should be given by a veterinary professional, as there are strict health and safety guidelines for administering cancer drugs. No special precautions are needed for handling your pet's urine or faeces following treatment.

What is the appropriate dose for dogs?

Your veterinary surgeon or neurologist will advise you about this. The standard dose is 50mg/m², given every 12 hours

for 2 days. The dose is repeated at three-week intervals for 8-12 months. If your dog does not show any signs of disease after this time period the interval between drug treatments can be increased to four weeks. If your dog remains disease free for the next 4-5 months the treatment intervals can gradually be increased. If, after treatment intervals have extended to eight weeks, there are no signs of relapse the treatment can be stopped. However, in some dogs treatment is for life.

How long will Cytosine Arabinoside take to work?

CA will not work immediately. It generally takes 5-7 days before you will see any benefit to your pet.

What are the risks and side effects of treatment with Cytosine Arabinoside?

In general, few animals experience side effects from CA, although it can cause a decrease in numbers of both red and white blood cells. For this reason, a blood test to check your pet's red and white blood cell counts is performed 2-3 days before injection; this is usually necessary only for the first 3-4 treatments. If the white cell count decreases your dog can become vulnerable to infection. Vaccination can still continue, but the use of live vaccines should be avoided.

Although there is no evidence in the literature of risks of contamination by direct contact with urine and faeces, it is advisable to use gloves or bags when handling biological waste for 48 hours following the treatment.

Are there any alternative treatments to Cytosine Arabinoside?

Alternative treatments are available for the treatment of GME or other immune-mediated inflammatory diseases. Your veterinary surgeon or neurologist can discuss these with you.