



CHRONIC LYMPHOCYTIC LEUKEMIA

What is chronic lymphocytic leukemia?

Disorders of the bone marrow are known generally as myeloproliferative disorders. Chronic lymphocytic leukemia (CLL) results from injury to the DNA of a single lymphocyte which resides in the bone marrow. This results in the eventual uncontrolled growth of CLL cells in the marrow resulting in an abnormally high cell count in the blood. CLL cells that are accumulating in the bone marrow do not usually impact normal blood cell production (as can be seen in cases of acute lymphocytic leukemia). In many cases, changes in the blood are found incidentally on general health profiles.

How is it diagnosed?

Early in the disease, virtually no clinical signs are seen. Again, we can find abnormalities incidentally on routine blood profiles. As the disease progresses, patients may tire more easily, have significant weight loss, and other nonspecific signs. Besides a routine physical examination, a complete blood cell count (CBC) will show an increased lymphocyte count. A bone marrow aspiration is also performed along with a CBC for the pathologist to review. Blood and/or bone marrow cells can also be submitted for a test called flow cytometry. This can show the specific lineage type (B cell or T cell) responsible for the leukemia.

How is it treated?

CLL is treated with an oral combination of a steroid (prednisone) and a chemotherapy pill called Chlorambucil (Leukeran). This will need to be continued for the rest of the animal's life. Fortunately, there are virtually no side effects from these medications. The prednisone can lead to increased drinking/urinating/appetite. After an adequate response is achieved, the prednisone is generally weaned down to a maintenance level. Initially, rechecks consist of a physical exam and repeat CBCs every 3 weeks for a few visits. Depending on the white blood cell counts, the rechecks are then extended out to 6 weeks, and then every couple of months.



What is the prognosis?

The overall prognosis is good for CLL. With the above medications, we can keep the lymphocyte count within the normal range for approximately 2-3 years with a very good quality of life. Once these medications stop being efficacious, other chemotherapy agents can be tried to control the lymphocyte counts but are generally not as effective.