

CNS Lymphoma

Cal Knowles

BME 282

University of Rhode Island

In general, lymphoma is a type of cancer that takes place in lymph nodes or other lymphoid tissue. Lymphoma is one of the few types of cancer that originates in the lymphatic system, which plays a huge role in our body's immune system. There are two main types of lymphoma, Hodgkins lymphoma and non-Hodgkins lymphoma. Hodgkins is a the rarer type and has the presence of specific cells called Reed-Sternberg cells. CNS Lymphoma is a type of non-Hodgkins lymphoma. Because CNS lymphoma is a non-Hodgkin type of lymphoma it rarely spreads outside of the Central Nervous System.

The causes of CNS lymphoma are not known, however, it is known that the white blood cells, which are essential to the immune system, start to become dangerous to the body. The risk of CNS lymphoma is higher for those who already have a weakened immune system, including but definitely not limited to those with HIV/AIDS. It is also far more common in adults, although it can affect people of all ages.

Symptoms of CNS lymphoma are pretty much the same as those of any brain tumor. They include headaches, seizures, facial paralysis, and confusion; though the exact symptoms depend on what part of the Central Nervous System that the cancer is in. Some more signs that are shown because of the pressure of the tumor on the brain are: nausea, blurred vision, and lethargy. Some other symptoms, due to potential nerve damage from the tumor, would be weakness, loss of hearing or vision, difficulty with walking and difficulty with talking.

As one might guess, it is very hard to get a correct diagnosis with such general and common symptoms. Blood tests are usually performed to get a white blood cell count for the patient and to identify cancer cells. A number of different types of scans can be done to try and properly make a diagnosis. These include CAT scans, MRI scans, PET scans, X-Rays, MRSI scans, and angiographies. After these initial scans, a biopsy is usually done. During a biopsy a surgeon will take a sample of tissues via an invasive method of the brain, spinal cord, or lymph node. This sample is then analyzed to determine the type of cancer and what stage it is in. In other cases the surgeon will drill a hole into the skull and remove a small piece of the tumor. Often times, the neurosurgeon will remove as much of the tumor as possible during this procedure.

Some of the treatments for CNS lymphoma are chemotherapy, lumbar puncture, radiation therapy, steroid therapy, biological therapy, as well as other forms. Prognosis is based on patients age, neurological damage, cell type, HIV positive or not, and the location of the cells.

"Primary CNS Lymphoma." *UCLA Health System*. 5 July 2007. Web. 12 Oct. 2009. <<http://neurosurgery.ucla.edu/body.cfm?id=211>>

"Central Nervous System Lymphoma." *Your Total Health*. 27 Feb. 2007. Web. 12 Oct. 2009. <<http://yourtotalhealth.ivillage.com/central-nervous-system-lymphoma.html?pageNum=6>>

"Primary CNS Lymphoma Treatment." *National Cancer Institute*. 18 June 2008. Web. 12 Oct. 2009. <<http://www.cancer.gov/cancertopics/pdq/treatment/primary-CNS-lymphoma/Patient>>.