

non-hodgkin's lymphoma

Non-Hodgkin's lymphoma is the commonest lymphoma seen in people with HIV. A lymphoma is the name given to a tumour (or growth) of lymphocytes (white blood cells). Non-Hodgkin's lymphoma (NHL) is caused by the unregulated production of B-cells, and is sometimes called B-cell lymphoma.

B-cells are one of the two main classes of lymphocytes, (the other being the T-cells). They are produced in the bone marrow and spleen and are involved in the production of antibodies. In HIV infection, B-cells typically become 'over-active'. People who are infected with Epstein-Barr virus (which also causes glandular fever), may develop a generalised increase in B-cell reproduction. In some people, particularly if the immune system is suppressed, the continuous replication of B-cells may cause lymphoma.

NHL may occur in the lymph nodes (glands), spleen, digestive system, liver, kidney or – in a particular form seen in immuno-suppressed people – in the brain, where it often occurs without any further spread and is called primary CNS (central nervous system) lymphoma. Although lymphoma can occur at any CD4 count, they are commoner in people with very low counts. NHL in people with HIV is more aggressive and responds less well to treatment than in HIV-negative people. With the advent of modern anti-HIV treatments many AIDS-related illnesses have become less common. It is unclear if this is also true for NHL.

Symptoms

Neurological problems seen in primary CNS lymphoma can include headaches, confusion, memory loss, lethargy, partial paralysis, loss of speech and seizures. Common symptoms of systemic lymphoma include fevers, swollen lymph nodes and spleen, weight loss and drenching night sweats. Other symptoms may also be present, depending on the parts of the body affected.

Diagnosis

NHL can be diagnosed from a sample of bone marrow, lymph node or other affected body tissue. A computerised scan of the head and torso will usually also be performed to measure how far the tumour has spread. If there are symptoms in the digestive system, an endoscopy might also be performed (using a flexible instrument which allows the inside of the body to be seen). Blood tests may also reveal

unusually high levels of lactate dehydrogenase (LDH) or of uric acid.

CNS lymphoma is usually diagnosed by a scan of the head. To exclude another illness called toxoplasmosis, a short trial of antibiotics may be used first. If there is no response, a brain biopsy is usually necessary to make a diagnosis. Sometimes, a sample of spinal fluid is tested both for lymphoma cells and for Epstein-Barr virus.

Lymphomas are ranked high, intermediate or low grade according to how rapidly the abnormal cells are growing, and then staged from I to IV based on the amount of the body which is involved. A further classification takes account of the shape and size of the abnormal B-cells.

Treatment

Standard treatment for primary CNS lymphoma is radiotherapy of the brain which may improve symptoms, though the outlook is often poor. This is usually accompanied by a short course of steroids, e.g. dexamethasone, to shrink both the tumour and swelling due to accumulated fluid. Some limited NHL in lymph nodes and skin may also respond to radiotherapy.

Systemic lymphoma is usually treated with combination chemotherapy with anti-cancer drugs. One widely used option is a combination called CHOP, which researchers have found effective in two thirds of recipients. Another called m-BACOD appears as effective, but at the cost of a higher level of side-effects. These may be easier to tolerate at higher CD4 counts, e.g. above 200, and doses may be reduced at counts below 100. Treatment is given in cycles, such as once every two weeks for six months, and is usually supported with medication for nausea and anxiety. Treatments which increase the number of blood cells, e.g. G-CSF and GM-CSF, may also be given to reduce side-effects. Because chemotherapy is immunosuppressive it is important to take treatment to prevent PCP at the same time.

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