Bloodwise

For anyone affected by blood cancer

Burkitt lymphoma

- *The titles in this series are intended to provide general information about the topics they describe.*
- *In many cases the treatment of individual patients will differ from that described.*
- *At all times patients should rely on the advice of their specialist who is the only person with full information about their diagnosis and medical history.*

What is Burkitt lymphoma?

Burkitt lymphoma (BL) is a tumour that was first described in 1958 by Denis Burkitt, a surgeon working in Africa. It is a tumour of lymphocytes, which form part of the white cell population in the blood and lymph glands. It is one form of non-Hodgkin lymphoma.

The type of cell affected in Burkitt lymphoma is the B-lymphocyte which is normally involved in fighting infection by producing antibodies.

The incidence of Burkitt lymphoma shows great geographical variation. It is the commonest childhood tumour in equatorial Africa but is very rare in children in Western countries. Recently Burkitt lymphoma has been diagnosed in around 2% of AIDS patients.

What causes it?

In almost all cases of African Burkitt lymphoma the cells carry a virus known as Epstein-Barr virus (EBV) named after the two British scientists who discovered it.

This virus is very common and over 90% of adults throughout the world have evidence of past infection. Clearly not everyone develops the tumour and so EBV alone does not cause Burkitt lymphoma. It must be only one of the factors necessary for the disease to develop.

Other possible contributory factors are chronic malaria infection in Africa and infection with the AIDS virus (human immunodeficiency virus - HIV) in Western countries.

Although it is uncommon, Burkitt does also occur in patients who have no obvious cause for immunosuppression. This is sometimes referred to as sporadic Burkitt lymphoma.

What are the signs & symptoms?

The effects of Burkitt lymphoma on the patient depend on the site of the tumour in the body. In African Burkitt lymphoma the jaw is the commonest site where it causes visible swelling of the cheek and loosening of the teeth. In non-African Burkitt lymphoma the tumour commonly arises in the abdomen where it causes swelling and discomfort.

Like all malignant tumours, Burkitt lymphoma may be very rapidly growing and often arises in, or spreads to, multiple sites.

How is it diagnosed?

Burkitt lymphoma is diagnosed from a biopsy sample of the tumour. A small piece

of the tumour is removed by surgery and the sample, stained by specific dyes, is examined under the microscope by a pathologist.

Burkitt lymphoma can be differentiated from other tumours by the distinctive pattern of tumour cells which is known as a starry-sky pattern. It is possible to use specialised laboratory techniques to determine the presence of EBV in the tumour cells.

How is it treated?

Although Burkitt lymphoma is a very rapidly growing tumour it responds well to treatment. In African children the drug cyclophosphamide is the treatment of choice. This drug is so effective that one dose may be enough to cause the tumour to disappear. However, it is very important to complete the course of treatment in order to prevent the tumour recurring.

In AIDS patients, treatment is less successful because of the underlying HIV infection. In addition to drugs, these patients are usually given X-rays which cause the tumour to shrink.

What is the prognosis?

See above.

This factsheet has been produced by Bloodwise, the new name for Leukaemia & Lymphoma Research. We're a specialist UK blood cancer charity and produce high quality patient information for people affected by blood cancer. We've updated the logo on the factsheet, but the information it contains was produced in October 2011 and will be updated soon.

For more details about this, or our patient information more broadly, please contact our patient information team.
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