



Medicine for Managers

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Hodgkin and his Lymphoma

Thomas Hodgkin was one of the country's great pathologists. After studying at Guy's and Edinburgh, he accepted a post at Guy's Hospital, which was the pre-eminent hospital boasting specialists like Astley-Cooper, Addison and Bright, from 1825-1837. He was a man of progressive views and in 1832, he described the lymphoma that bears his name. His books became classics in the study of pathology.

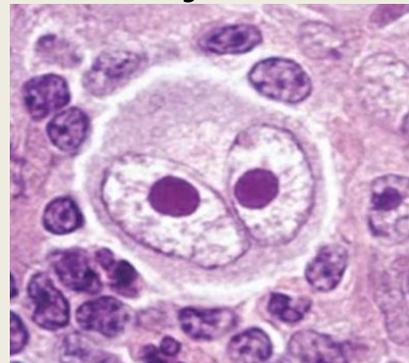


Hodgkin is probably known only for the lymphoma but, during his tenure as lecturer and Curator of the Guy's Hospital Museum, he suggested major changes to medical education including the development of pre-clinical training and the importance of walking to wards with a physician to see and examine patients.

A **lymphoma** is a cancer of the lymphatic system. There are two main forms of lymphoma; the **Hodgkin lymphoma** and the **non-Hodgkin lymphoma**. Lymphoma occurs when a type of white blood cell called the lymphocytes, which form part of the immune system, multiply uncontrollably. They can travel to any parts of the body to form tumour

masses. The body has two types of lymphocytes which can develop into lymphomas; B-lymphocytes (B-cells) and T-lymphocytes (T cells). T-cells, developed from the thymus gland are involved in cell-mediated immunity, whereas B-cells, developed in the bone marrow, are responsible for antibody production. The function of the cells is to provide the body with the immune response by recognising 'foreign' proteins (antigens). The B-cells attack infections (antigens) with antibodies, whilst the T-cells attack them with manufactured granules of toxic enzymes.

There are approximately 2,000 new cases of Hodgkin lymphoma (disease) in the UK each year. Non-Hodgkin lymphoma is much more common. Hodgkin lymphoma is characterised by the presence of large abnormal cells called **Reed-Sternberg cells**.



The disease normally starts in a lymph node and may spread to other lymph nodes or other organs.

Hodgkin lymphoma has a peak incidences in young adults and those over 70, men are more commonly affected than women and there is no significant ethnic differences.

The risk of acquiring the disease is increased if the individual has a disease that weakens the immune system, such as HIV, takes immunosuppressant medication or has previously had glandular fever (Epstein-Barr virus). The risk is also increased if a first degree relative has also had the disease.

Hodgkin lymphoma sufferers display:

- Night sweats
- Fever
- Weight loss
- Lethargy

There are a number of variants of Hodgkin lymphoma, which are differentiated by histological differences, aggressiveness of development and relapse rates.

Treatment options have improved considerably over the last half century and survival rates have increased by 70% since the 1970s. These days most patients will be treated with chemotherapy though for some radiotherapy is the first line treatment of choice. There are now a variety of combinations of chemotherapy which are managed under specialist conditions. Some combination therapy may consist of 6-8 different drugs. Dosage has been continuously improved to achieve the excellent results that are obtained whilst minimising the ill-effects of the medication. Stem cell transplantation is now used increasingly in those patients with relapses or with disease which is refractory to medical treatments.

Patients who have had a treated lymphoma should have regular medical reviews with regular haematology testing and CT scans as necessary to monitor for relapse.

Considering that the disease has borne Hodgkin's name for the last 150 years, it is interesting to note that his defining manuscript was barely recognised during his life and not mentioned in his obituary. It was Dr Samuel Wilks, in 1865, who published a manuscript on the condition and referred to the disease in the title of his manuscript as **Hodgkin's disease**.

Non-Hodgkin Lymphomas differ from Hodgkin lymphomas. They too are cancers of the lymph nodes and lymphatic system but they have a particular appearance under the microscope and do not have the Reed-Sterberg cells characteristic of Hodgkin's disease. The distinction is important because they are different diseases which, although similar, are treated in different ways.

Factors increasing the risk of developing non-Hodgkin lymphoma are similar to those for Hodgkin lymphoma.

Non-Hodgkin lymphoma can affect almost any part of the body although the most common location for first presentation is in the lymph nodes in the neck. It is also found in the liver



and spleen but it can occur anywhere including the bowel, stomach, skin, bones, brain or testicles. About one person in three has lymphoma in an organ outside the lymphatic system and this is called **extra-nodal disease**.

Most patients with non-Hodgkin lymphomas have disease affecting the B-cells although T-cell lymphomas are more common in the young.

The symptoms of non-Hodgkin lymphomas are:

- Painless swellings in the neck, armpit or groin.
- A swinging fever
- Heavy sweating at night
- Loss of much weight
- Unexplained itching
- Anaemia, clotting disorders and infections if the bone marrow is infiltrated by the disease
- Other symptoms depend on the organ affected, so that seizures or headaches may occur if the brain is involved.

There are many different types of non-Hodgkin lymphoma but they can be classified broadly into two and the survival and recovery rates vary according to the group

1. **High Grade and Aggressive**
2. **Low grade and slowly developing**

The survival and recovery depends on the nature of the tumour and how aggressive it is.

Slow growing tumours may take years to cause symptoms but are often very difficult to treat. Aggressive tumour multiply rapidly but tend to be more sensitive to treatment and a higher percentage are cured.

As with Hodgkin lymphomas the choice lies between

- **Chemotherapy**
- **Radiotherapy**

After treatment it is essential to have regular medical checks, including regular investigations of blood and scans of affected areas, to identify recurrence or relapse quickly and efficiently.

Thomas Hodgkin died in 1866 of dysentery whilst visiting Palestine. His visit was philanthropic and was supporting an attempt to relieve the miseries of the Jews, working with his close friend Sir Moses Montefiore. Sir Moses arranged his funeral in Jaffa and over his grave is an obelisk which bears the inscription:

“Here rests the body of Thomas Hodgkin, M.D., of Bedford Square London, a man distinguished alike for scientific skill and self-sacrificing philanthropy.”

He was a generous, caring Quaker. He was careless about collecting fees; yet when Sir James Clark collected 300 guineas for him in a testimonial, he refused the money for himself and donated it to the Medical Benevolent College. In his later years he devoted his life to benevolent causes.

Were he to return now, one feels that he would be overwhelmed by the advances in his beloved medicine and particularly of the huge successes in the treatment of lymphomas.

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