Rhabdomyosarcoma

What is Rhabdomyosarcoma?

Rhabdomyosarcoma is a cancer that develops from muscle cells. It can arise in many different areas of the body. The most common sites are the head and neck, bladder, prostate gland, arms, legs and vagina. Other less common sites are the chest, abdomen, and genital and anal area. Rhabdomyosarcoma is the most common type of soft tissue sarcoma found in children.

Who gets Rhabdomyosarcoma?

Rhabdomyosarcoma accounts for 4% of all childhood cancers. The majority of children are younger than 9 years of age at the time of diagnosis. Tumours of the bladder and vagina occur more often in infants and young children; tumours of the trunk and extremities (arms & legs) are more likely to affect older children and adolescents. Rhabdomyosarcoma is slightly more common in males than in females.

What causes Rhabdomyosarcoma?

There is no answer at this time as to the cause of rhabdomyosarcoma. We do know, however that cancer is not contagious or ‘catching’. No behaviours or lifestyle habits, including those practiced during pregnancy, have been associated with the development of these tumours.

What are some of the signs & symptoms of Rhabdomyosarcoma?

The symptoms of Rhabdomyosarcoma and soft-tissue sarcoma depend on the location of the tumour. For example, if the tumour is located in the head or neck there may be swelling around the eye (proptosis) or a lump in the neck. If the tumour is located in the arm or leg there may be a tender or enlarged area in the muscle. Tumours in the bladder may cause bloody urine (haematuria) or difficulty in urinating.
How can Rhabdomyosarcoma be treated?

Three types of therapy are commonly used to treat Rhabdomyosarcoma, namely surgery, radiation and chemotherapy. The type of therapy chosen depends upon the type of tumour and the extent of the disease. If the tumour is so large that it would require very major surgery, it is reduced by chemotherapy before surgery. Chemotherapy is continued for several months and up to 2 years after surgery to make sure any secondaries are killed off. Sometimes radiotherapy is more effective in shrinking the tumour and may be given before surgery, as well as afterwards when it will kill off any malignant cells that may have been left.

A combination of treatment is often used. Your child’s doctor will talk with you about the best treatment for your child, and you and the doctor will make the decision about treatment.

What tests and procedures will my child need?

To diagnose rhabdomyosarcoma or soft-tissue sarcoma and to determine the extent of your child’s disease, a number of tests and procedures are necessary, including many of the following:

- Tumour biopsy - this test is necessary to make a diagnosis and to determine what treatment should be chosen. The biopsy is usually done through an incision made by the surgeon in the operating room when the child is under anaesthesia. A biopsy may also be performed in the radiology department where the biopsy sample is obtained through a needle guided into the tumour.

- Bone marrow aspiration & biopsy - this test is necessary to determine whether there are tumour cells in the bone marrow (the blood-producing factory of the body).

- Blood tests - are done to monitor the child’s blood cells, body salts and chemistries.

- MRI (magnetic resonance imaging) - is a test that gives very exact pictures of organs and tumours inside the body.

- CAT scan (computerised axial tomography) - CT or CAT scan is a computer-assisted x-ray that shows very precise pictures of internal organs and tumours.
• Bone Scan- A bone scan may be done to determine whether there has been metastasis (spreading) of the tumour to any of the bones.

• X-ray- a complete skeletal x-ray may be necessary to confirm the findings of the scans. A chest x-ray will be done to determine whether the tumour has spread to the lungs.

• Ultrasound- this test uses high frequency sound waves to look at internal body organs or tumours. It can help to determine tumours in the lymph nodes, abdomen or scrotum.

More information on tests is found in the procedure section of this folder.

How long will my child’s therapy last?

The length of therapy depends on the type and stage of your child’s tumour at the time of diagnosis. Usually the treatment is given over several months, and it could last as long as one year. Follow-up blood tests and check ups between chemotherapy treatments are usually done in clinic.

What are the long term effects, if any?

A large number of children who develop a rhabdomyosarcoma are cured. The chances are slightly better with some tumours, such as those around the eye, and lower when the tumour has spread from its original site. Long-term side effects depend on exactly what surgery or radiotherapy was needed and on what drugs were given to your child.

Further Information

For further information see section ‘Sources of more information on cancer’ or ask any member of the team.