Ewing's Sarcoma Family of Tumors for the Pediatric Patient

What is Ewing's sarcoma family of tumors?

The Ewing's sarcoma family of tumors includes several types of cancerous tumors that share common chromosomal abnormalities. Ewing's tumors are found in the body's bones or in soft tissues and are made up of small, undifferentiated round cells. They are most frequently found in one of the long bones of the leg or arm; the flat bones of the ribs or pelvis; or the spine; but they can occur in any bone in the body or in soft tissues.

Ewing's sarcoma of the bone is the second most common childhood bone cancer and most frequently occurs in children or young adults 10 – 20 years old. Most patients are Caucasian or Hispanic (the disease is rare among people of Asian and African descent). Ewing's sarcoma is also more common in boys than in girls.

A Ewing's tumor found in the soft tissue is called an extraosseous Ewing's sarcoma (EES). EES is most commonly found in the thigh, pelvis, spine area, chest wall, or foot. Peripheral primitive neuroectodermal tumor (PNET) which occurs in bone or soft tissue, is the least common member of the Ewing's family of tumors. It is also a round-cell tumor and is made up of young nerve cells.

What are the symptoms of Ewing's sarcoma family of tumors?

The most common symptoms of Ewing's tumor are pain, stiffness, or tenderness at the site of the tumor. There may also be swelling or a mass around the affected bone or tissue. Often a pathological fracture (a break that occurs without trauma) is present at diagnosis because the tumor has weakened the bone. Other less common symptoms of Ewing's tumor are weight loss and fever.

How is Ewing's sarcoma family of tumors diagnosed and treated?

If your child has symptoms of Ewing's sarcoma or related tumors, his or her doctor may order several diagnostic tests including a biopsy of the tumor, x-rays, an MRI, a CT scan, bone scans, PET scans and a bone marrow aspiration and biopsy. These tests will help determine the size and location of the tumor and whether it has spread to another part of the body.

Three types of therapy are commonly used to treat Ewing's tumors. Chemotherapy is always used and surgery (limb salvage or amputation) or radiation is used for local control. The type of therapy chosen depends upon the age of your child and the extent and location of the disease.

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