

PAEDIATRIC CANCERS IN SINGAPORE

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It is always very emotional and shocking when a loved one falls sick with cancer. And more so when it happens to young kids as it extracts a tremendous psychological toll on the parents and the siblings. It is always unexpected to see children who were previously healthy and happy suddenly grow sick and tired from cancer.

In Singapore, leukaemia or blood cancer is the most common childhood cancers. It makes up to almost 4 in 10 (40.8%) of all childhood cancers according to the Cancer Registry data up to 1997. By itself, cancer in children is very rare. According to the Singapore Children Cancer Registry, there are 1,103 cases registered in Singapore from 1997 to 2005, which averages to about 120 cases per year. The incidence of childhood cancer is about 137.5 per million per year in Singapore. Half of these cases occur in children below 5 years of age.

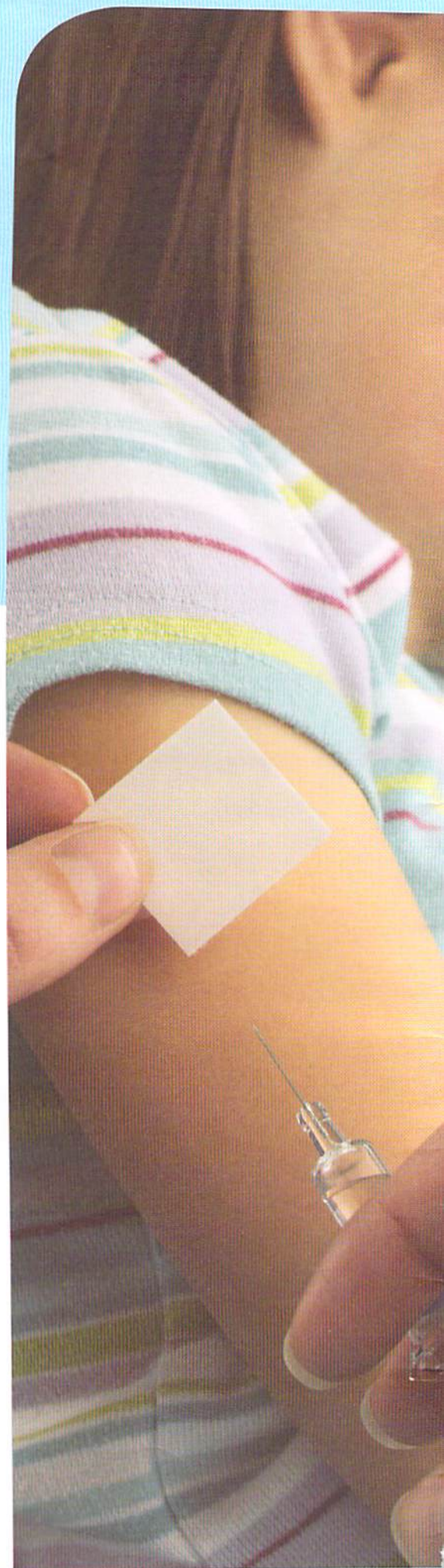
The next most common childhood cancers are brain and spinal neoplasms (17.4%), and lymphoma (9.5%). There is an increasing trend of incidence observed in most childhood cancers except for Non-Hodgkin's lymphoma (NHL), renal tumours and malignant bone tumours.

The survival for all cancers was markedly improved from 30-35% in the period 1968-77 to 55-60% in the period 1988-97. The survival rates especially for patients with leukaemia, NHL and renal tumours, has improved by more than 20% over the three decades. The survival rate of childhood cancer patients has markedly improved in Singapore because of better treatment regimens and outcomes. These results are in line with world-wide trends. Despite increasing incidences of cancer, the treatments have also improved, resulting in better survival outcomes.

Big scientific groups like POG (Paediatric Oncological Group) trials have incrementally resulted in better drug combinations, safer regimens for resource-poor countries and better tolerated side effects.

LEUKAEMIA

Some common symptoms for kids with leukaemia is tiredness and bleeding spots. The diagnosis is usually made with a blood test and a bone marrow biopsy for confirming the presence of malignant blast cells. Further tests are done to confirm the diagnosis. The treatment usually consists of systemic chemotherapy and consolidation radiotherapy in the higher risk patients. There is a move towards giving less radiotherapy to the brain and spinal cord in some of these kids because of the concern towards long term side effects of radiation.





BRAIN CANCER

The next group of patients with brain cancer often present with giddiness, vomiting, unsteadiness. A brain scan usually clinches the diagnosis. Depending on the type of cells, the patient will often require combination treatment with surgery, chemotherapy and radiotherapy. The remission rates are excellent in early stages before spinal metastasis. Similarly there is a concern for the long term side effects of radiation, but unlike leukaemia, radiation is still an integral part of the treatment process in childhood brain cancers. In some centres outside Singapore, there is the availability of the proton teletherapy machines, which are by far, the current state of the art treatment for paediatric brain cancers. The National Cancer Centre Singapore is actively engaging in fund-raising with the hope of building a proton centre facility for this purpose. Proton therapy relies on a physics phenomenon called the Bragg peak which results in a very sharp dose drop off unlike normal photons which continue to have an exit dose. What results are a very precise dosage and the ability to reduce the dose to the surrounding normal organs.

WILMS TUMOUR, RHABDOMYOSARCOMA AND EWINGS SARCOMAS

The last group childhood cancers consist of solid organ tumours, which are rare cancers like Wilms tumour, rhabdomyosarcoma and ewings sarcomas. The child can present with a mass which can be painful or painless. Some kids are very sick while some are still well and behave normally. The diagnosis is made with a panel of tests and imaging and with general clinical acumen of a paediatrician with a sceptical eye to suspect cancer. All these patients generally also require some form of surgery to remove the tumour, and consolidation chemotherapy and radiation to prevent systemic and local relapse. Treatment can last a few months and involve multiple hospital visits to different specialities.

The effect on the child, who is emotionally affected, as well as the parents and family, cannot be neglected in the holistic treatment of these patients. The younger ones develop a phobia of doctors, needles and therapists and need gentle coaxing. At least one of the parent needs to take time off from work or from caring for the other kids to bring the sick child to the hospitals for treatment. The emotional toll and financial burden on the family can be devastating. But there are also charitable organisations in Singapore like Children Cancer Foundation, Make a Wish Foundation as well as Viva Foundation which make it a part of their mission to either help financially, offer comfort or develop new novel cures.

It has been said that it takes a village to care for a child with cancer. We have dedicated teams of specialist doctors, nurses and therapists to help the patient and the family bear the burden of their disease with more ease. In some cases, patients with fever while undergoing chemotherapy have expedited admission to the dedicated cancer ward without a need to go through the accident and emergency departments of the paediatric hospitals. There is also an emergency number they can call to ask for advice.

REFERENCES: Singapore Childhood Cancer Registry 1997 – 2005, <http://www.nrdo.gov.sg/uploadedFiles/NRDO/Publications/Spore%20Childhood%20Cancer.Registry%20Report.pdf>