

Autologous Haemopoietic Stem Cell Transplantation Brings New Hope to Children Rheumatic Diseases

Rheumatism makes people feel cheek pulls taut, and leads to joint stiffness and joint pain. Not only elderly people but also children are susceptible to get arthritis and rheumatism, which may cause disability, damage in organs or blindness.

Children Rheumatic Diseases comprise of more than 150 subtypes like Kawasaki's disease and juvenile dermatomyositis. Juvenile idiopathic arthritis and systemic lupus erythematosus account for about 80% of all the cases.

The exact causes are not known. What is known is that the rheumatic diseases are autoimmune diseases, where the immune system misrecognizes one's own tissues and cells as foreign and produces auto-antibodies, causing inflammation in body parts like joints, bones and other organs.

5% to 10% of the patients with rheumatic diseases are refractory to conventional medications and autologous haemopoietic stem cell transplantation (AHSCT) is a new form of therapy for severe autoimmune diseases worldwide. The Queen Mary Hospital (QMH) has started AHSCT for some suitable patients since 2001. AHSCT consists of 2 stages: 1) Selecting out and storing the patient's stem cell followed by chemotherapy and 2) Re-infusing the stem cell into the patient. The immune system resets after the stem cell regenerated the 'new' immune system.

To date, 9 patients have undergone the new therapy in QMH, 3 of them have stopped medications after the transplantation, the other 3 since then has been receiving minimal immunosuppressive medications, only 2 relapsed 9 months and 12 months after AHSCT but the diseases are readily controlled with moderate dose immunosuppressives.