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CliniMACS Prodigy System: A breakthrough approach for cancer patient

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CliniMACS Prodigy System gives cancer patient Hope for un-matched Bone Marrow transplant, CAR T cells, DC cell, NK cells



As per the analysis, doctor says that 70% of blood cancer patients were left with no donors. For many patients with blood cancers like leukaemia's, lymphomas & Thalassemia; Bone marrow transplantation is a life-saving therapy.

Medical oncologist follows the standard blood-generating stem cells protocols that are obtained from a donor, a sibling, with a 100 % perfect match to the patient in order to minimize the chance of rejection and other complications.

It has observed that, not all patients will have a perfectly matched sibling, hence treatment get delayed due to wait for exact match. Dr Pradeep Mahajan, Regenerative medicine researcher, StemRx introduces CliniMacs prodigy System giving hopes for cancer patient for bone marrow transplant with un-matched donor.

For the first time in India a cell manufacturing system that will cater to the requirements of clinical Haemato-Oncologist to address the patients' needs for malignant and non-malignant transplants.

More than 5000 patient benefited through CliniMACS Prodigy System all across the world. This will help those with cancer and genetic diseases to easily avail transplantation. Opting for an alternate transplant donor will be easy with this technique, benefitting many patient suffering from leukaemia or other cancers.

During the medical conference organised at Seven Hills Hospital, Mumbai; Dr Pradeep Mahajan, Regenerative medicine researcher, StemRx introduce "CliniMACS Prodigy System" said "It was not possible to opt for a transplant unless the perfect blood cells match, however with the inclusion of this new technique half matched transplant is also possible. It can eliminate long waiting periods for BMT donor & save many lives. It is a certified GMP-grade cell manufacturing system that involves reprogramming of DNA immune system cells called T cells so that they attack the tumour in the body."

At the launch, renowned doctors and medical specialists discussed on various clinical advantages related to CliniMACS Prodigy system.

Dr. Sunil Bhatt, Head of Department Paediatric Haematology, Oncology and Bone Marrow Transplant at Narayana Health City, Bangalore said, "Initially it was mandatory that blood cells from siblings needs to be matched for transplant. This led to only 25 to 30% chances of finding a perfect match and 70% of patients were left with no donors. However, with this new technique alternate donor transplant from blood relatives that match half is also possible. This increases the option of finding a treatment for Cancer patients."

Dr. Meenakshi Sing, Scientific Officer, ?Department of Transfusion Medicine Tata Memorial Hospital, said, "The role of natural killer cells in stem cell transplant has a positive impact on cancer, acute leukaemia, solid or liquid tumour patients as cells induce removal of residual leukaemia cells in cancer patients."

Dr Minal Poojary, Blood Bank Officer, Tata Memorial Hospital, said, "There are various types of transplant with various risks and advantages. As per the condition of the patient the collected cells are modified. The processing of these cells is as per indication from the doctor and the patient's needs."

Dr Pradeep Mahajan said "Extracting stem cells from the bone marrow is a painful & risky for the donors who can sometimes require blood transfusions. The two step method uses stem cells harvested from the blood of siblings. Using the stem cells from blood is not only easier for donor, but also gives doctors the ability to control the exact number of immune cells called T cells, which fight the cancer. "

"Patient suffering from cancer has to undergo chemotherapy, that helps keep those cell from becoming over reactive followed by cancer fighting T cells. CAR- T cell immunotherapy shows strong promise for treating various cancers and infectious diseases," Added Dr Mahajan. "The procedure will be carried under the guidance of expert medical oncologist & clinician said Dr Mahajan.