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Editorial

Transplant of Bone Marrow

Aakshi Kainthola*

Department of Life Sciences, Graphic Era Deemed to be University, Dehradun, India

EDITORIAL NOTE

A bone marrow transplant is a medical procedure that replaces your healthy cells in your bone marrow. Replacement cells can come from either your own body or a donor. A stem cell transplant or, more specifically, a hematopoietic stem cell transplant is another name for a bone marrow transplant. Transplantation can be used to treat cancers that affect the bone marrow, such as leukaemia, myeloma, and lymphoma, as well as other blood and immune system illnesses. Hematopoietic stem cells are found in bone marrow, which is a soft, spongy tissue in the body. Most bones include it in the core.

Blood contains hematopoietic stem cells, which circulate throughout your body. Damaged hematopoietic stem cells may not develop into red blood cells, white blood cells, or platelets. These blood cells are vital, and each one serves a specific purpose: Red blood cells: Your body's oxygen is carried by red blood cells. They also transport carbon dioxide to your lungs for exhalation. White Blood Cells: Your immune system is made up of white blood cells. They battle pathogens, which are viruses and bacteria that can cause illness. Platelets: To stop bleeding, platelets form clots. A bone marrow/stem cell transplant is a medical treatment that involves the transplantation of healthy stem cells into your bone marrow or blood. Your body's ability to produce red blood cells, white blood cells, and platelets is restored as a result of this.

DIFFERENT TYPES OF TRANSPLANT

Autologous transplant

Autologous transplantation is when a person's own cells are used to an autologous transplant uses stem cells from your own body. Cancer is occasionally treated with high-dose, intense chemotherapy or radiation therapy. This form of treatment has the potential to harm your stem cells and immune system. That's why, before starting cancer treatment, doctors extract or rescue your stem cells from your blood or bone marrow. The stem cells are then restored to your body after chemotherapy, restoring your immune system as well as your body's ability to make blood cells and fight infection. This procedure is also known as a stem cell rescue or an AUTO transplant. Allogenic Transplant: An allogenic transplant uses stem cells from another individual, known as a donor. After the patient has had chemotherapy and/or radiation therapy, the donor's stem cells are delivered to the patient. An ALLO transplant is another name for this procedure.

Umbilical cord transplant

Transplantation of umbilical cord blood. Umbilical cord blood stem cells are employed in this sort of transplant. Before birth, the umbilical cord connects a foetus to its mother. The baby does not require it after birth. Cord blood is used in cancer clinics all around the world. Haplotype mismatch transplant and parent-child transplant: Cells from a parent, kid, brother, or sister do not always match a patient's HLA type perfectly, although they are usually close. Doctors are doing these types of transplants more frequently in order to increase the use of transplantation as a cancer treatment.

COMPLICATIONS ASSOCIATED WITH BONE MARROW TRANSPLANT

Graft-Versus-Host Disease (GVHD), in which donor cells attack your body; graft failure, in which transplanted cells do not begin producing new cells as planned; bleeding in the lungs, brain, and other regions of the body; cataracts, in which the lens of the eye becomes clouded; early menopause. Anemia is a condition in which the body does not create enough red blood cells. Mucositis, a disorder that causes inflammation and pain in the mouth, throat, and stomach, can induce nausea, diarrhoea, or vomiting.

Correspondence to: Aakshi Kainthola, Department of Life Sciences, Graphic Era Deemed to be University, Dehradun, India, **E-mail:** aakshi.kan7@gmail.com

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