

Letter to the Editor

Stem cell therapy: a promising solution for type 2 diabetes in Pakistan

Sir,

The World Health Organization (WHO) has reported that non-communicable diseases (NCDs) are responsible for 58% of deaths in the Pakistani community. Diabetes mellitus being among the top four NCDs contributing to the stated percentage.¹ It has been stated that 16.98% of Pakistan's population has fallen victim to type II diabetes mellitus, hence demanding the need for effective and innovative measures.²

Diabetes mellitus is a chronic condition in which the body is in a hyperglycemic state. This eventually negatively affects many body organs including the heart, kidneys, eyes, and limbs. Type II diabetes mellitus specifically is late in onset, and results from decreased production of insulin along with reduced uptake of glucose by cells. Moreover, WHO has declared diabetes as the primary culprit behind loss of vision, stroke, kidney failure, and heart attack.³ Hence highlighting the growing need to put an end to it.

The treatment of type II diabetes mellitus being used nowadays includes subcutaneous insulin injection, metformin, sulfonylureas, and sodium-glucose transport protein 2 (SGLT-2) inhibitors, along with lifestyle modification.³ However these current methods are not curative in nature and are associated with decreased compliance of patients in Pakistan. Despite all these challenges, there is still a ray of hope and that is in the use of Stem cell therapy in treating type II diabetes mellitus.

Stem cell therapy has shown promising results in treating diabetes mellitus type I, hence indicative of its potential use to combat diabetes mellitus type II. This therapy involves harvesting and then transplanting multipotent stem cells in the patient. Multipotent stem cells can be obtained from different tissues including bone marrow and blood in the umbilical cord, which by the process of differentiation can form cells like beta cells of the pancreas. Transplantation of these cells according to research has been shown to improve insulin and c-peptide levels.⁴ Even more, this therapy is targeting the root cause of the issue rather than just treating the patient symptomatically hence making it an attractive option.

The introduction of such an intervention in Pakistani healthcare will not only be beneficial for the patient but also for the Pakistani healthcare industry. As it will propel doctors and policymakers to opt for and introduce innovative and modern therapeutic techniques. Hence, let us advocate this advancement in medicine and promote more research on this topic for the sake of the well-being of the Pakistani community.

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