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An artificial pancreas- a cure for type 1 diabetes?**Maleesha Rasanji Jayasinghe and Minollie silva***Nanjing Medical University, Jiangsu Province, China*

Type 1 diabetes is a chronic disease characterized by inadequate or absent insulin production. It is believed that genetic factors, viral exposure, and environmental factors play a role in the development of the disease, although its exact cause is unknown. The most common treatment for T1DM is exogenous insulin, but it is not a cure for the disease. Another potential treatment for T1D is pancreatic transplantation, which can replace defective insulin-producing cells. However, transplantation may not be a viable option because it requires extensive surgery and long-term immunosuppression. Islet cell transplantation is another treatment that has gained popularity in recent years, but it is still affected by variables such as inflammatory response and hypoxic environment. In addition, the need for high doses of immunosuppressants and the rarity of human cadaveric islets may restrict its clinical application. The revolutionary discovery of stem cells has elevated the sophistication of biological sciences, allowing for the manipulation of cell fate and the cultivation of higher-order cellular structures. They are a highly promising new treatment for T1DM due to their capacity to restore peripheral tolerance toward beta-cells by reconfiguring the immune response and inhibiting the function of autoreactive T cells. To determine the optimal route of administration, dosage, and timing to maximize the patient's benefits, larger-scale studies are required. This article discusses the various SC therapies used to treat T1DM, including their feasibility, limitations, and role in the treatment of T1DM

Biography

Maleesha jayasinghe, 25 year old from Sri Lanka, is a fifth-year medical student studying at Nanjing medical university, china. She previously served as her school's captain and is currently a student representative at her medical school. She is fluent in three languages. Coffee is her favourite beverage. She enjoys playing chess, badminton and Frisbee with her friends, when she has a free time. She is passing for research. She likes to discover innovative approaches to assist in creating global health policies that will impact marginalized communities.