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Frequency, pattern and determinants of erectile dysfunction in Bangladeshi diabetic men

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Erectile dysfunction (ED) is an important impediment to quality of life. Diabetes mellitus is one of the most common causes of ED. However, it has been one of the most neglected complications of diabetes mellitus. Our objective was to study the prevalence of ED and its risk factors in Bangladeshi diabetic men. During 2002-2004, 700 diabetic men aged 20-69 years were interviewed to report on their experience of ED as defined in the National Institutes of Health Consensus Conference 1993. ED was found in 246 (35.1%) of this population. Prevalence of ED was increased with age from 9.7% in men aged 20-39 years to 43.4% in those aged over 60 years ($P < 0.001$). Men with type I diabetes reported ED less frequently than did men with type II diabetes ($P = 0.037$). In comparison with patients with reported diabetes lasting ≤ 5 years (25.4%), the prevalence of ED was less than in those with diabetes of 6-11 years (34.3%) and of 12-30 years (43.5%, $P < 0.001$). ED increased significantly in those who had poor glycemic control. Prevalence of ED in patients with good, fair and poor glycemic control was 28.4%, 39.9% and 44.4% respectively ($P = 0.004$). Type of treatment (diet alone, oral agents, insulin and insulin plus oral agents) had significant association with ED and its severity ($P < 0.001$).

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Layer-by-layer surface modification of islet cells with poly-L-glutamic acid-biotin

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Type 1 diabetes mellitus (T1DM) is a cell-specific autoimmune disease triggered by selective destruction of the insulin producing β cells within the pancreatic islets. The transplantation of the islet cells is a promising approach for the treatment of type 1 diabetes on condition of using immunosuppressive drugs. However, there are numerous side effects associated with immunosuppressant drugs. So, transplantation of these islet cells after masking the antigens on the cells surface can solve this problem. Poly amino acids are used in many biomedical areas. In this study, poly-L-glutamic acid modified with biocytin (PLGA-Biocytin) was used for surface modification of islet cells. PLGA-Biocytin structure was elucidated by FT-IR and NMR analysis. PLGA-Biocytin interactions were provided on individual islets via layer-by-layer assembly technique. The surface of the islets is modified with Sulfo-N-hydroxysuccinimide (Sulfo-NHS)-LC-Biotin and the islets are further covered by streptavidin (SA) and PLGA-Biocytin using the layer-by-layer method. In-vitro viability of islet cells and insulin secretion were assessed in both control and PLGA-Biocytin group as a response of exposure to cytokine combination. Viability results of surface modification group islet cells with 48 hours cytokine exposure (52.3%) were found similar with islet cells of control group (55.9%). This method can be considered as developable method for islet cell transplantation.

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