



Category: Clinical Genomics

A Replication Study of ND3 rs2853826 association with Type 2 Diabetes in North Indian Population

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Abstract

Type 2 Diabetes (T2D) is a complex disease and genetic is one of factor contributing to its pathogenesis. Both decreased body sensitivity to insulin and defects in insulin production are involved in T2D development. ND3 is one of the subunit of complex I which is located in inner mitochondrial membrane of mitochondria. Mitochondrial activity can regulate insulin sensitivity and insulin production. Further, variations in mitochondrial DNA have been shown to raise the risk of T2D. In this study, we replicated the association of ND3 rs2853826 with T2D in a total of 1759 samples (684 T2D cases and 1075 healthy controls) belonging to North India. We observed that ND3 rs2853826 is significantly associated with TD in the studied population and the estimated odds ratio (OR) is 1.65 (1.33 - 2.05 at 95% CI). Thus, our findings replicate and support earlier studies implicating the association of ND3 gene with T2D in Indian population.

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