

**Yohimbine can be the new promising therapy for
erectile dysfunction in type 2 diabetics**

Madam, Diabetes mellitus, especially type 2 is positively related to the rising obesity levels in the present day scenario. Late sequelae of diabetes include retinopathy, neuropathy and nephropathy.¹ In males, the diabetic complication which can significantly hamper the quality of marital life is erectile dysfunction. Erectile dysfunction affects nearly 100 million men world wide of which 52% belong to age group 40-70 years.² Its prevalence in diabetics is nearly double (45.8%) than that of non diabetics (24.1%).³ Recently a study identified an association between a polymorphism in the human α 2a-adrenergic receptor gene (ADRA2A) and a reduced ability of pancreatic beta cells to release insulin. The beta cells carrying the risk allele make too many α 2a-adrenergic receptors, which impairs the docking of insulin granules at the plasma membrane — a priming step that normally results in the lining up of insulin-containing vesicles at the membrane, ready to release their contents in response to a rising glucose level.⁴

The activation of α 2-adrenergic receptors is known to suppress insulin secretion in vivo, which probably accounts for the glucose intolerance frequently observed in patients with Pheochromocytoma. Goto-Kakizaki (GK) rat, a model with attenuated insulin release that shares with humans a diabetes susceptibility locus was used in this experiment and researchers found that when yohimbine was given to mutant rats their islets behave as normal. In two separate cohorts of human subjects who did not have diabetes, these researchers found that polymorphisms in and around ADRA2A were associated with reduced insulin secretion, and in a case-control population they showed

association with the risk of type 2 diabetes.⁴

Yohimbine has been used for years in the treatment of male sexual disorders especially erectile dysfunction and it has high affinity for alpha 2a adrenergic receptors. Many authorities claim it to be used as first line agent in treating erectile dysfunction.⁵ Keeping these two points in mind that in type 2 diabetics there is high population of alpha receptors and that alpha antagonists can clinically cure the erectile dysfunction, we may conclude that yohimbine can be the new promising therapy for erectile dysfunction in type two diabetics. Hope we could find a better place for this drug in the pharma land of diabetes.

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