Following the common association between testosterone deficiency and diabetes mellitus, can testosterone be regarded as a new therapy for diabetes?


Abstract: Type 2 diabetes mellitus (T2DM) is increasing at epidemic proportions worldwide, representing a risk factor for cardiovascular diseases. Nowadays, hypogonadism and erectile dysfunction (ED) are considered frequent, although often under-diagnosed, complications of T2DM. Recent evidence suggests that in a diabetic population ED itself is an efficient predictor of silent coronary heart diseases. Patients with T2DM have an impaired sexual life, which is worsened by hypogonadism. Low T in T2DM is in fact associated with more severe ED, hypoactive sexual desire and low intercourse frequency. Testosterone replacement therapy (TRT) has been proven to improve sexual function in hypogonadal men. In addition, TRT improves adiposity, insulin resistance and total cholesterol. Specific studies on the effect of TRT in T2DM are scanty. This review will evaluate the contribution of low testosterone in diabetic subjects with sexual dysfunction. In addition, we have also reviewed available evidence on potential metabolic benefits of testosterone supplementation in T2DM patients.