

Diabetic hypogonadism: advances in diagnosis and treatment

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Hypogonadism in diabetic patients is a frequently underestimated clinical syndrome characterized by signs and symptoms of androgen deficiency but also by fertility disorders. The pathophysiology of diabetic hypogonadism is complex and multifactorial. Altered blood glucose regulation, hyperinsulinism and obesity determine hypothalamic and gonadal dysfunction.

A bundle of new arguments raise the interest of search and to treat hypogonadism in diabetic patients. First of all, several epidemiological studies (1) show that testosterone deficit predicts the occurrence of a metabolic syndrome and diabetes, and that this deficit is accompanied by a higher cardiovascular mortality (2). Then, nine recent studies show that intensive weight loss achieved by diet and/or weight loss surgery normalizes levels of testosterone (3). Furthermore, a meta analysis bearing on five studies confirms that the supplementation of testosterone in diabetic hypogonadic patients induces a modest reduction in abdominal circumference, decreasing glycemia and HbA1c (4). Finally, some studies indicate that supplementation with testosterone in these patients improve their survival (5).

If all these of observation and intervention studies suggest positive effects induced by testosterone, we should regret a lack of randomized large studies, assessing the risks and benefits of testosterone long term hormonal supplementation in diabetic patients. This presentation summarize the current evidence linking the androgenic deficit with type 2 diabetes and its implications on cardio metabolic risk.

References

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