

# Testicular Dysfunction is a Common Feature in Men with Type 2 Diabetes Mellitus in a Nigerian Tertiary Hospital

[ Vol. 14 , Issue. 3 ]

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## Abstract:

**Background:** Hypogonadism in male patients with diabetes mellitus is associated with older age, obesity and poor glycaemic control. The patterns of sperm count, testicular volume, sperm motility and morphology have also been reported to be abnormal in these patients, though reports are conflicting. The objectives of this study were to assess gonadal function and sperm parameters in Nigerian males with diabetes mellitus.

**Methods:** A study sample of 150 males consisting of 108 patients and 56 age-matched controls were recruited. The ADAM questionnaire was used to obtain a clinical score for hypogonadism. Laboratory parameters measured were fasting plasma glucose, serum LH, FSH, free testosterone, total cholesterol, LDL, HDL and triglyceride. Testicular volume was measured with a Prader orchidometer. Total sperm count, sperm morphology and motility were assessed.

**Results:** Hypogonadism was present in 38.9% of males with diabetes compared to 3.6% in controls. The patients with diabetes had significantly lower sperm count, reduced sperm motility with increased abnormal forms than the controls ( $p < 0.001$ ,  $p < 0.001$ ). Only 8.5% of the patients did not demonstrate any abnormality in testicular function.

**Conclusion:** Poor sperm function was more common than hypogonadism and was associated with poor glycaemic control ( $p < 0.001$ ). Likewise, hypogonadism was significantly associated with poor glycaemic control ( $p < 0.001$ ).

## Keywords:

Hypogonadism, type 2 diabetes, males, glycaemic control, sperm function, Nigeria.

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