THREE OUT OF FOUR ADULT MALE PATIENTS WITH TYPE 2 DIABETES MELLITUS AND SYMPTOMATIC MODERATE TO SEVERE ERECTILE DYSFUNCTION HAVE HYPOGONADISM.

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BACKGROUND & OBJECTIVES

Background

Studies suggest that 25-40% of men with type 2 diabetes mellitus (T2DM) have hypogonadism.[1,2] Other studies have estimated that 40-50% of men with T2DM have erectile dysfunction (ED).[3] Some guidelines suggest routine measurements of testosterone in all patients with T2DM.

Objectives

To estimate the prevalence of hypogonadism in adult male patients with type 2 diabetes mellitus and symptomatic erectile dysfunction.

METHODS

MALE PATIENTS WITH T2DM & SYMPTOMATIC ED (30-60 Years)

INFORMED CONSENT

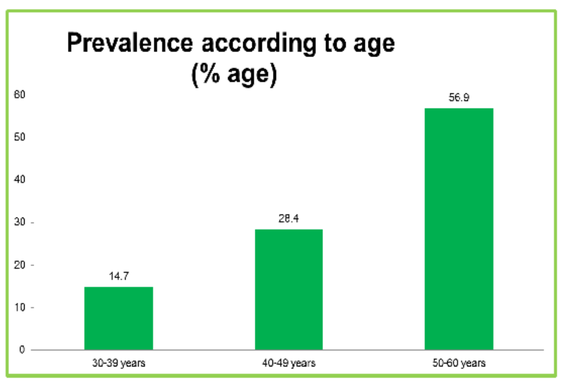
IIEF ADMISTERED[4]

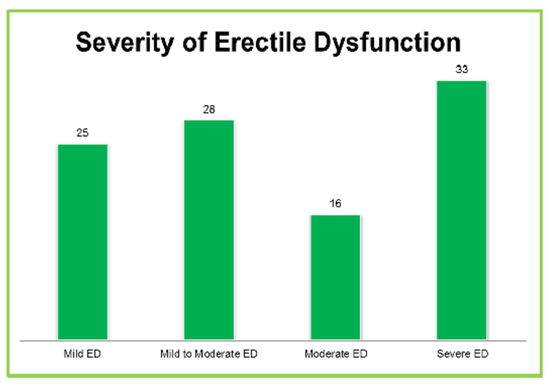
BIOCHEMICAL ASSESSMENTS

ANALYSIS

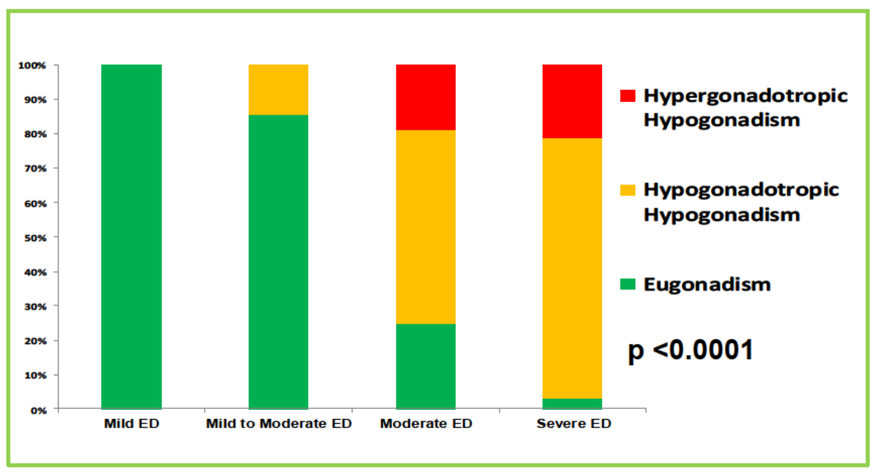
Consecutive adult male patients (between 30 and 60 years) with ED and T2DM attending diabetic clinic in a tertiary hospital were recruited after informed consent. Patients with psychiatric illness, renal disease, liver disease, previous pelvic surgery and major neurological diseases were excluded. ED was graded using the **International Index of Erectile Dysfunction (IIEF) questionnaire**.[4] Biochemical assessment of hypothalamic-pituitary-gonadal (HPG) axis was undertaken by collecting **morning samples** for serum luteinizing hormone, follicle stimulating hormone, prolactin and total testosterone. These were analysed on an ELECSYS automated system. Patients were classified as either being eugonadal or having either hypogonadotropic hypogonadism (HH) or hypergonadotropic hypogonadism (HHG).

Graphs





FREQUENCY OF HYPOGONADISM ACCORDING TO SEVERITY OF ED (AS PER IIEF).



RESULTS

112 PATIENTS CONSENTED

102 PATIENTS COMPLETED STUDY PROCEDURES

- EUGONADAL (n=58)
- HYPOGONADOTROPIC HYPOGONADISM (n= 38)
- HYPERGONADOTROPIC HYPOGONADISM (n=10)

The mean age at diagnosis was 50.3 yrs. and the median age was 53 yrs.

112 patients consented for the study. Of them 102 patients completed all the study related procedures and were included in the analysis. 54 (52.9%) of men with T2DM and ED were eugonadal, 38 (37.3%) had HH and 10 (9.8%) had HHG. All 25 patients with mild ED (IIEF scores 17-21) were eugonadal. While of 28 patients with mild to moderate ED (IIEF scores 12-16), 24 (85.7%) were eugonadal and 4 (14.3%) had HH. Of the 16 patients with moderate ED (IIEF scores 8-11) 4 (25%) were eugonadal, 9 (56.3%) had HH and 3 (18.8%) had HHG. Among the 33 patients with severe ED (IIEF score 1-7) only 1 (3%) was eugonadal, 25 (75.8%) had HH and 7 (21.2%) had HHG. (p-<0.0001)

CONCLUSIONS

- ✓ **OVER 75% OF PATIENTS WITH MODERATE TO SEVERE ED HAVE SUBNORMAL TOTAL TESTERONE LEVELS**
- ✓ **ONE IN FIVE PATIENTS WITH SEVERE ERECTILE DYSFUNCTION (21.2%) AND MODERATE ED (18.8%) HAVE PRIMARY TESTICULAR FAILURE.**
- ✓ **ROUTINE HORMONAL EVALUATIONS OF THE HPG AXIS IS PROBABLY ONLY REQUIRED IN PATIENTS WITH MODERATE TO SEVERE ED WITH TYPE 2 DIABETES**

No disclosures

References

1. **Diabetes Care** 2007; 30: 911-17
2. **J Endocrinol Invest** 1984; 7: 21-24
3. **Diabetes Care** 2008; 31: 2013-2017
4. **Urology** 1997; 49 : 822-30

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Diabetes (to include obesity, pathophysiology & epidemiology)
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