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The Relationships Between Serum Testosterone and Prolactin Levels and Nocturnal Penile Tumescence (NPT) in Impotent Men

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Serum testosterone (T) and prolactin (PRL) levels, nocturnal penile tumescence (NPT), penile and brachial blood pressure, and bulbocavernosus reflex latency (BCR) were assessed in 172 impotent men ranging in age between 19 and 60 years. Patients were also examined for Peyronie's disease. Patients who were taking drugs that are known to affect T or PRL levels, and those with overt primary or secondary testicular failure, liver disease or renal disease, were excluded from the study.

Androgen deficiency (T < 264 ng/dl) or hyperprolactinemia (PRL > 15 ng/ml) was observed in 22% of the patients, and 62% had abnormal NPT. We found that NPT was abnormal in 11 of the 12 men (91.7%) with T levels below 251 ng/dl or with PRL levels above 25 ng/ml ($P < .001$), and in 81.0% to 93.8% of men with other detectable and relevant medical abnormalities. Eight of the 12 patients with T levels below 251 ng/dl or PRL levels above 25 ng/ml had other detectable abnormalities. In contrast, NPT was abnormal in only 10 of 34 men (29.4%) who had no apparent medical abnormality or disease.

These studies indicate that in impotent men, T deficiency and/or hyperprolactinemia, alone or with other conditions, are associated with abnormal NPT sufficiently frequently to warrant routine measurement of both T and PRL, particularly if it can be demonstrated that correction of these abnormalities restores potency.

Key words: impotence, serum testosterone, serum prolactin, nocturnal penile tumescence, hyperprolactinemia, androgen deficiency

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