Idiopathic Hypogonadotrophic Hypogonadism after Testosterone Treatment

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A 38 year old male previously well with normal pubertal development presented with 3 month history of erectile dysfunction. Patient was initially noted to have difficulty in sustaining erection that progressed to complete loss of libido and erectile dysfunction. There was no history of head trauma, cranial surgeries, previous infection, strenuous exercise, steroid intake or history of illicit drug use. Physical examination showed absent eunuchoid facies, Tanner V axillary and pubic hair distribution with a penile size of 4.5cm and testicular volume of 15ml on the left and 12ml on the right. Hormone workup showed low testosterone at 109.4 ng/dl (249-836ng/dl Normal values) with a low FSH and LH. Routine blood tests found his complete blood count, electrolytes and creatinine to be within normal range. Bone densitometry findings showed osteoporosis with a bone density T score of -3.5 at the lumbar area. Magnetic resonance imaging of the sella showed a tiny faint focus of hypointensity apparent in the early post contrast images but is not clearly delineated in the subsequent dynamic runs. Patient was given testosterone replacement therapy and PDE5 inhibitor which improved symptoms.

Conclusion: The underlying mechanism of hypogonadotrophic hypogonadism remains to be a puzzle due to rarity of disease. Since this disease involves only the gonadotropins speculation in previous studies propose that it is an autoimmune disease. Treatment of patients with this disease should aim to address fertility goals of patients.