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TITLE

THE EFFICACY OF CLOMIPHENE CITRATE IN INFERTILE MALES

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ABSTRACT

Introduction: Spermatogenesis requires very high levels of testosterone (T) in the testis, much higher than that in the bloodstream. When a man is given exogenous T, luteinizing hormone (LH) in T levels then falls. Although blood levels of T might rise a bit, the very high levels of T in the testis then fall to that of the blood, and spermatogenesis is actually suppressed. The purpose of our study was to see the effects of clomiphene citrate (CC) on hormonal levels and spermatogenesis in infertile males.

Methods: Fifty-three infertile men,25-50 years old were included in this study and was treated with CC 25mg, od, from 2013-2015.Serum values for follicle stimulating hormone (FSH), LH, total testosterone(TT), free T (FT),sex hormone binding globulin (SHBG), estradiol (E) as well as complete semen analyses were identified before and after CC treatment. Exclusion criteria included azoospermia and men treated before with T, HCG during previous 6 months.

Results: Serum hormone values significantly ($p<0.01$) increased for FSH (? 3.08 mIU/L), LH (? 244mIU/L), TT (252,4 to 438 ng/dL), FT(5.25ng/dl), SHBG(5.32 nmoI/L), and E (1.94 ng/dL). Patients with a baseline FSH of ?2mIU/mL (n=4) had a no change in semen density (? -13.2±14.4 million/mL) or total motile count (TMC, ? -20.7±20.5 million). Men with an initial FSH>2 (n=34) had a mean change in density of +1.68 ±1.56 million/mL and a significant improvement in TMC(? +3.5±3.0 million, p=0.03). There were no significant differences between the serum levels in men with baseline FSH levels of ?2 or >2 mIU/L.

Conclusion: Treatment with CC in infertile men exhibit a significant increase in serum hormone levels. Measuring FSH prior CC therapy may be a useful predictor of improvement in semen parameters.

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