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Influence of Anabolic Steroids on Male Fertility Among Healthy Gyms-Goers in Mosul City

Abstract:

Misuse of anabolic-androgenic steroids (AAS) is on the rise globally, particularly among male gymgoers who use them to gain muscle and enhance their physical appearance. Because AAS abuse affects the hypothalamic-pituitary-gonadal axis and can temporarily or permanently reduce spermatogenesis, it is thought to be a preventive factor in male fertility. The study aimed to examine the impact of anabolic steroid abuse based on semen characteristics, serum FSH, LH, and free Testosterone hormone levels suggesting a reduction in male bodybuilders' fertility. Eighty healthy male gym-goers from Mosul city were separated into the case and control groups for a prospective cohort research. For a period ranging from September 28, 2020, to March 15, 2021, a structured interviewing questionnaire was employed to gather data on AAS misuse, blood sampling, and semen specimen for examination of serum levels of FSH, LH, Free T, and sperm parameters, respectively. The AAS group experienced a significant drop in the mean serum levels of luteinizing hormone, follicle-stimulating hormone, and free testosterone ($P = 0.000$). According to a semen study, the overall mean of the total count of sperms per ejaculate was (18.83×10^6 vs. 139.5×10^6) As compared to the control group, the proportion of sperm motility was significantly lower. The risk of developing oligospermia is five times higher in the AAS group compared to the control group (RR: 5; 96 percent CI: 2.690-9.293; $P = 0.001$). Male fertility is significantly impacted by the use of AAS; users showed significantly reduced levels of gonadotropins, which may indicate hypogonadism, as well as low free testosterone and sperm counts, both of which may indicate poor spermatogenesis. The study advises against anabolic steroid addiction and warns against its negative side effects, which have a particularly negative impact on fertility.