

Impact of obesity on male fertility

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Abstract

Rationale: Nowadays, obesity and dyslipidemia are more prevalent , studies had shown that obese men have around 50% higher rate of infertility compared to normal weight men Aim of the work is to study the impact of obesity on male infertility Subjects and methods This study included 90 males aged (25 - 45) years old , divided into three groups . Semen samples to assess semen quality plus a blood sample to measure serum testosterone and leptin levels were collected Results A statistically significant increases of mean BMI in obese fertile and obese infertile groups compared to non-obese infertile group (p. < 0.0001) .There was a statistically significant increase of mean serum leptin in obese infertile group compared to obese fertile group (p. < 0.0001) and compared to obese fertile group (p. < 0.0001). There was a statistically significant increase of mean serum testosterone level in obese fertile group compared to non-obese infertile group (p < 0.01) and there was a statistically significant increase of mean sperm motility in obese fertile group compared to obese infertile group Conclusion. BMI & serum leptin levels in obese infertile men were significantly higher than obese fertile men. Serum leptin had significant negative correlation with sperm count, motility and testosterone level. Leptin had significant correlation with the abnormal sperm morphology. Men with high BMIs had a significant decrease in sperm count, and motility as well as increase in the abnormal forms of spermatozoa compared to those with low BMIs.

Keywords: Obesity, Infertility, Semen Quality, Testosterone, Leptin.