Abstract

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Selenium status of idiopathic infertile Nigerian males.

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OBJECTIVE AND METHODS: Selenium concentration in the sera and seminal plasma of 60 infertile males (40 oligospermia and 20 azoospermia) and 40 males with proven evidence of fertility (normospermia; control group) were estimated using atomic absorption spectrophotometry. Results were correlated with spermatogram and hormonal levels in order to determine their relationship and significance in male infertility.

RESULTS: The mean serum concentrations of selenium was found to be significantly increased in oligospermic compared to azoospermic subjects and controls ($p < 0.01$), whereas the seminal plasma level was significantly higher in azoospermic compared to oligospermic subjects and controls ($p < 0.001$). Thus, the ratio of serum selenium to seminal plasma selenium was 1: 1 in controls, 4: 1 in oligospermia, and 1: 2 in azoospermic subject.A significant inverse correlation was observed between serum selenium level and sperm count ($p < 0.01$). Similarly, seminal plasma selenium correlated with spermatozoa motility, viability, and morphology. Serum selenium level shows positive correlation with the serum testosterone level ($p < 0.01$).

CONCLUSION: In conclusion, there appears to be a physiological balance in the distribution of selenium in serum and seminal plasma compartment of control males. A disturbance in this balance has a significant influence on spermatogenesis. Selenium appears to have a positive influence on Leydig cells, thus influencing the secretion of testosterone.

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