

The effect of vitamin C, vitamin E, zinc, selenium and coenzyme Q10 in infertile men with idiopathic oligoasthenozoospermia

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Background: Accumulating evidence suggests that oxidative stress plays an important role in the development of male infertility and recently antioxidants have been tried to treat men with idiopathic infertility.

Objective: To assess the effect of treatment with vitamin C, vitamin E, zinc, selenium and coenzyme Q10 on seminal fluid parameters in infertile men with idiopathic oligoasthenozoospermia.

Materials and methods: A prospective randomised trial was conducted on thirty-two infertile men with idiopathic oligoasthenozoospermia who received a daily supplement of one caplet containing vitamin C (90 mg/day), vitamin E (15 mg/day), coenzyme Q10 (4 mg/day), selenium (30 µg/day) and zinc (5 mg/day) for three months. Semen analysis was performed at baseline and three months after treatment using WHO 2010 guidelines.

Results: Significant improvement in sperm concentration was observed after combination therapy (9.13 ± 4.29 vs. 11.3 ± 6.05 *10⁶/ml, $P < 0.05$). Sperm progressive motility (18.1 ± 8.68 vs. 24.6 ± 10.2 %, $P < 0.01$) and total motility (28.4 ± 8.71 vs. 34.4 ± 11.7 %, $P < 0.01$) also increased significantly following treatment. No change, however, was observed in semen volume or the proportion of sperms with normal morphology.

Conclusion: The combination of vitamin C, vitamin E, zinc, selenium and coenzyme Q10 can significantly improve sperm concentration and motility infertile men with idiopathic oligoasthenozoospermia which could be attributed to their synergistic antioxidant action.

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