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TITLE

EFFECT OF ANTIOXIDANT SUPPLEMENTATION ON SPERM PARAMETERS IN OLIGO-ASTHENO-TERATOZOOSPERMIA, WITH AND WITHOUT VARICOCELE: A DOUBLE BLIND PLACE CONTROLLED (DBPC) STUDY

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ABSTRACT

Sperm has high energy requirement for maturation, capacitation and motility. Many factors affecting sperm quality act through decreasing energy and increasing reactive oxygen species (ROS) by causing mitochondrial dysfunction.

To determine the effect of an antioxidant supplementation on sperm quality in subjects with oligo- or astheno-teratozoospermia, with and without varicocele and history of difficulty conceiving.

This was a monocentric, randomized, DBPC with a total of 104 patients (52 supplementation and 52 placebo) with varicocele and without. The study evaluated the efficacy of 6 months of supplementation versus placebo. Spermogram evaluation was done at the beginning of treatment (V1) and at the end of the treatment (V2).

Sperm count in patients with varicocele was 39.3 +/- SD 16.8 in placebo group and 49.4 +/- 18.9 in supplementation group; in patients without varicocele 47.5 +/- 7.9 in placebo group and 52.3 +/- 9.1 in supplementation group. Total sperm motility in patients with varicocele was 33.9 +/- 6.9 in placebo group and 38.3 +/- 8.0 in supplementation group; in patients without varicocele was 35.0 +/- 7.5 in placebo group and 39.9 +/- 8.0 in supplementation group. Progressive sperm motility in patients with varicocele was 23.1 +/- SD 6.7 in placebo group and 27.4 +/- 7.9 in supplementation group; in patients without varicocele was 25.1 +/- 7.0 in placebo group and 29.7 +/- 9.1 in supplementation group.

In our study, at the end of the treatment we observed a marked increase in quality parameters of sperm such as count and in total and progressive motility especially in varicocele patients. The supplementation was safe and no adverse events were observed.

INSTITUTE

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