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ANTIOXIDANT COMBINATION THERAPY: A NEW HOPE FOR OLIGOATHENOTERATOSPERMIC PATIENTS.

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Title:

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ACCME Disclosure

Nothing to disclose. No off-label or otherwise non-approved product use.

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Abstract Text:

OBJECTIVE:

Idiopathic oligoasthenoteratospermia (iOAT) is a challenging condition often seen in up to 40% of infertile men and has been linked with increased seminal oxidative stress. This study aims at evaluating the effect of antioxidant combination formula (FH PRO) on the semen parameters and advanced sperm function tests in patients with iOAT.

DESIGN:

Prospective clinical trial.

MATERIALS AND METHODS:

Patients presenting to the Male infertility clinic with semen parameters showing iOAT (sperm concentration > 1 and ≤ 15 million/ml, motility ≤ 40%, normal forms ≤ 4.0%) were included in the study. Patients with clinical varicocele, epididymo-orchitis, irradiation or chemotherapy, history of recent STDs infection, malignancy and recent antioxidant use were excluded. Study subjects received antioxidant formula FH Pro, Fairhaven Health (1000 mcg B12, 30mg Zinc, 140mcg Selenium, 350mg Arginine, 2000mg, 200mg Co-Q10, 120mg Vitamin C, 200IU Vitamins E) (Fairhaven Health, Bellingham, WA) daily for 3 months.

Semen samples were collected before and after treatment and analyzed according to WHO 5th edition guidelines and for oxidation reduction potential (ORP) (MiOXSYS analyzer, Aytu Bioscience, Englewood, USA) and sperm DNA fragmentation (Halosperm kit, Halotech, Madrid, Spain). Numbers (percentages) were used to report categorical values while mean ± SE was used to report numerical values. Results were compared using Kruskal Wallis Test and a p value of <0.05 was considered statistically significant.

RESULTS:

52 infertile patients completed the study with a mean age 35.7±6.6 years and a mean infertility duration 5.9±4.2 years. There was a significant improvement in semen parameters including sperm count (p0.001), progressive motility (p0.002) and normal morphology (p0.001) compared to pre-treatment results. Significant decrease in seminal oxidation reduction potential was observed (p 0.001), as well as significant decrease in sperm DNA fragmentation (p0.007).

CONCLUSIONS:

Medical treatment of infertile men with idiopathic OAT by Fairhaven Pro resulted in a significant improvement in semen parameters, reduction in seminal oxidative stress and sperm DNA fragmentation. We conclude that these changes should lead to improvement in men's fertility and better outcome in natural conception as well as in assisted reproduction.

Parameters	Pre-treatment	Post-treatment
Vol (ml)	3.26±0.28	3.09±0.23
Concentration (millions/ml)	6.21±0.66	11.46±1.82*
Motility (%)	18.56±1.62	27.2±2.73*
Progressive Motility (%)	0.23±0.16	3.37±0.91*
TMSC (millions/ejaculate)	4.288±0.83	11.86±2.65*
Normal Morph (%)	1.4±0.13	2.4±0.28*
DNA Fragmentation (%)	49.58±5.34	35.68±4.68*
ORP (mV/106 sperm/mL)	18.79±3.09	10.34±1.67*

*p<0.05

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