

**Abstract #2845**

**EFFICACY OF ANTIOXIDANT SUPPLEMENTATION ON CONVENTIONAL AND ADVANCED SPERM FUNCTION TESTS IN PATIENTS WITH IDIOPATHIC MALE INFERTILITY**

**Mohamed Arafa, MD<sup>1</sup>**, Ashok Agarwal, PhD<sup>2</sup>, Ahmad Majzoub, MD<sup>1</sup>, Kareim Khalafalla, MD<sup>1</sup>, Sami Alsaïd, MD<sup>1</sup> and Haitham Elbardisi, MD<sup>1</sup>, (1)Hamad Medical Corporation, Doha, Qatar, (2)Cleveland Clinic, CLEVELAND, OH

**Title:**

EFFICACY OF ANTIOXIDANT SUPPLEMENTATION ON CONVENTIONAL AND ADVANCED SPERM FUNCTION TESTS IN PATIENTS WITH IDIOPATHIC MALE INFERTILITY

**Submitter's E-mail Address:**

mohamedmostafaarafa@gmail.com

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**ACCME Disclosure**

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

**Did this abstract require approval by a local Institutional Review Board (IRB) or equivalent?**

This abstract has been approved by a local Institutional Review Board (IRB) or equivalent.

**Abstract Text:**

**OBJECTIVE:**

Antioxidants have long been used in the empirical treatment of infertile men. While a positive effect has been reported by a number of studies, others have failed to reproduce any benefit leading to controversy regarding their efficacy in the treatment of infertility. The aim of the present study was to evaluate the effects of antioxidant combination therapy on conventional semen parameters and advanced sperm function tests in men seeking fertility.

**DESIGN:**

Prospective clinical trial.

**MATERIALS AND METHODS:**

148 patients presenting with male factor infertility to a tertiary medical center with at least one abnormal semen parameter over a period of 6 months were included. Patients with varicocele, leukocytospermia, history of genitourinary infections, any febrile illness and exposure to chemotherapy were excluded.

All participants were treated with the antioxidant supplement FH-PRO (1000 mcg B12, 30mg Zinc, 140mcg Selenium, 350mg Arginine, 2000mg, 200mg Co-Q10, 120mg Vitamin C, 200IU Vitamins E) (Fairhaven Health, Bellingham, WA) for a period of 3 months. Semen analysis, sperm DNA fragmentation (SDF) (Halosperm kit, Halotech, Madrid, Spain), oxidation reduction potential (ORP) (MiOXSYS, Aytu BioScience, Englewood, CO) and hormones (estradiol, FSH, LH, prolactin, and testosterone) were performed on all participants initially and following treatment. Numbers (percentages) were used to report categorical values while mean  $\pm$  SE to report numerical values. Results were compared using Wilcoxon Signed Ranks Test and a p value of  $<0.05$  was considered statistically significant.

**RESULTS:**

The mean age of study participants was  $35.9 \pm 0.5$  years and body mass index  $29.6 \pm 0.4$  Kg/m<sup>2</sup>. Compared to the pretreatment test results, there was statistically significant improvement in conventional semen parameters including sperm concentration, total and progressive motility and normal morphology after 3 months of treatment with FH-PRO. Furthermore, a significant improvement in advanced sperm function tests (SDF & ORP) was also observed following antioxidant supplementation.

**CONCLUSIONS:**

Treatment of patients with idiopathic male infertility with FH-PRO antioxidant regimen for 3 months resulted in significant improvement in conventional semen parameters and advanced tests of sperm function. It may offer promise to the medical treatment of idiopathic male infertility.

**TABLE:**

Parameters	Pre-treatment	Post-treatment
Semen volume (ml)	$3.18 \pm 0.12$	$3.12 \pm 0.11$
Sperm concentration (10 <sup>6</sup> /ml)	$22.23 \pm 2.01$	$30.57 \pm 2.26^*$
Total motility (%)	$34.59 \pm 1.43$	$38.47 \pm 1.54^*$
Progressive motility (%)	$4.00 \pm 0.61$	$8.06 \pm 0.81^*$
Normal morphology (%)	$2.86 \pm 0.19$	$3.98 \pm 0.26^*$
SDF (%)	$38.63 \pm 2.10$	$32.04 \pm 1.82^*$
ORP (mV/10 <sup>6</sup> sperm/mL)	$10.26 \pm 1.29$	$6.21 \pm 1.18^*$

\* P<0.05

First Presenting Author

***Presenting Author***

Mohamed Arafa, MD

**Email:** mohamedmostafaarafa@gmail.com -- Will not be published

Hamad Medical Corporation

Urology Department, Hamad General Hospital, HMC

Hamad Medical Corporation

Doha 3050

Qatar

Second Author

Ashok Agarwal, PhD

**Email:** agarwaa@ccf.org -- Will not be published

Cleveland Clinic

10681 Carnegie Avenue

X-11, Andrology Center

CLEVELAND OH 44160

USA

Third Author

Ahmad Majzoub, MD

**Email:** dr.amajzoub@gmail.com -- Will not be published

Hamad Medical Corporation

Urology Department, Hamad General Hospital, HMC

Hamad Medical Corporation

Doha 3050

Qatar

Fourth Author

Kareim Khalafalla, MD

**Email:** dr.kareim.moh2@gmail.com -- Will not be published

Hamad Medical Corporation

Urology Department, Hamad General Hospital, HMC

Hamad Medical Corporation

Doha 3050

Qatar

Fifth Author

Sami Alsaid, MD

**Email:** salsaid1@hamad.qa -- Will not be published

Hamad Medical Corporation

Urology Department, Hamad General Hospital, HMC

Hamad Medical Corporation

Doha 3050

Qatar

Sixth Author

Haitham Elbardisi, MD

**Email:** Elbardisi@hotmail.com -- Will not be published

Hamad Medical Corporation

Urology Department, Hamad General Hospital, HMC

Hamad Medical Corporation

Doha 3050

Qatar