



EFFECT OF ORAL ANTIOXIDANT TREATMENT IN SPERM DNA FRAGMENTATION

CLINICAL STUDY PRESENTED AT THE IX INTERNATIONAL CONGRESS OF ANDROLOGY
- BARCELONA 7-11 MARCH 2009 -

Hebles María², González Mercedes¹, Dorado Mónica¹, Migueles Beatriz¹, Aguilera Laura¹, Sánchez Fernando², Sánchez Pascual², Cruz Natalio^{1, 2,3}.

¹Fundación Guadalquivir de Investigación Médica, Sevilla. ²Clinica Ginemed, Sevilla.

³ Servicio de Urología del Hospital Universitario Virgen del Rocío, Sevilla.

Objective: Numerous studies show that an increase of the DNA fragmentation index is related to a diminution in the pregnancy rate due to decrease in male fertility. The DNA fragmentation index is one of the causes of repeated failures in reproduction assisted techniques⁽¹⁾.

Previous studies have demonstrated a reduction in the sperm DNA fragmentation by oral antioxidants treatment^(2,3)

The aim of this studie is to evaluate the effectiveness of the treatment with oral antioxidants in patients on assisted reproduction programs who presented a damage in the DNA of the spermatozoa, as well as to evaluate the effect of such treatment on the rest of the seminal parameters.

Material and method: The study includes 72 couples that went to GINEMED clinic due to infertility problems all of whom presented a DNA fragmentation Index (DFI) > 30%, determined by Sperm Chromatin Dispersion technique (SCD). All patients received treatment with oral antioxidants (LEX VITAE®) during an average period of 2 months, 1 pill per day, before starting an In Vitro (IVF) cycle.

N=72	BEFORE TREATMENT	AFTER TREATMENT
DFI (average)	40%	27%

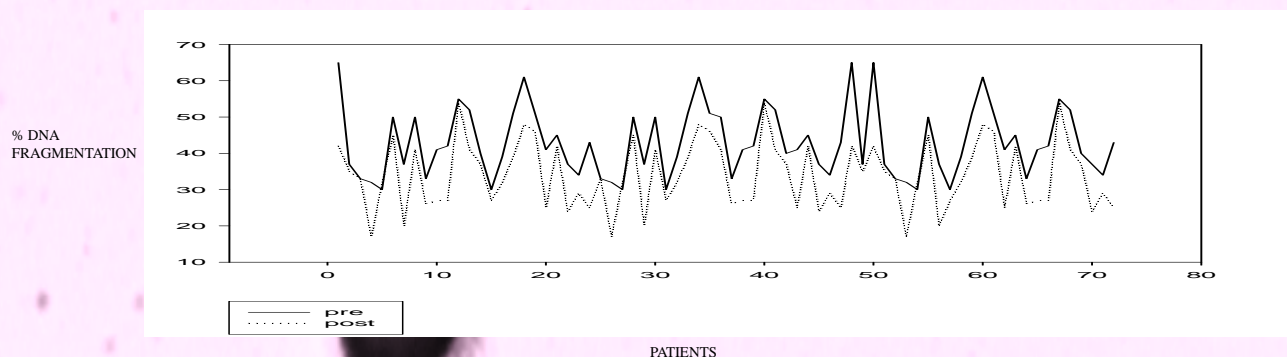
Lex Vitae® Composition per capsule:

Melon extract 15 mg.
 SOD 14,000 UI/gr dry matter.
 Catalase 5,000 UI/gr dry matter.
 GSSG 105.82 µg/100g.
 GSH 24.22 µg/100 g.
 Coenzyme C10 10.08 mg/100 g.
 Brewer's yeast 10 mg.
 Selenium 20 µg.
 Vitamin A 800 µg

Polyphenol-rich grape extract 15 mg.
 Glutathione (GS) 25 mg.
 L-Methionine 75 mg.
 Taurine 75 mg.
 L-Cysteine 105 mg.
 Vitamin C 60 mg.
 Vitamin E 10 mg.
 Folic Acid 150 µg.
 Zinc 15 mg.

Result: Statistically significant difference (p < 0,001) in the values of the DNA Fragmentation index is observed before and after receiving the treatment with oral antioxidants.

Differences in the rest of the seminal parameters are not observed.



Conclusion: Our findings appear to confirm that treatment with oral antioxidants is an effective way to diminish the DNA fragmentation index in patients prior to IVF treatment.

References:

¹Tesarik J, Mendoza-Tesarik R, Mendoza C. Sperm nuclear DNA damage: update on the mechanism, diagnosis and treatment. *RBM Online* 2006;12: 715-21.
² Greco E, Iacobelli M, Rienzi L, Ubaldi F, Ferrero S, Tesarik J. 2005. Reduction of the incidence of sperm DNA fragmentation by oral antioxidant treatment. *Journal of Andrology* 2005;26:349-53
³ Greco E, Romano S, Iacobelli M, Ferrero S, Baroni E, Minasi M. G, Ubaldi F, Rienzi L, Tesarik J. ICSI in cases of sperm DNA damage: beneficial effect of oral antioxidant treatment. *Human Reproduction* 2005;20:2590-4.