

Abstract

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May antioxidant therapy improve sperm parameters of men with persistent oligospermia after retrograde embolization for varicocele?

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OBJECTIVE: We performed a randomized, prospective, controlled, intention to treat study in order to determine the effectiveness of an antioxidant therapy in improve the quality of seminal fluid parameters and the natural pregnancies in men with persistent oligospermia (5-20 million/ml) 6 months after retrograde embolization.

METHODS: Forty-two subjects were enrolled and randomized in the study. Treated group (20 subjects) was assigned to receive antioxidant therapy (NAC 600 mg and vitamins-minerals). Untreated group (22 subjects) received no adjunctive medical therapy and was used as controls. Our data were analyzed with an intention to treat strategy.

RESULTS: A statistically significant increase in sperm count after antioxidant therapy was recorded ($P=0.009$). After this therapy, no statistical differences in percentage of WHO class A motile sperm ($P=0.752$) and typical forms ($P=0.926$) were found. The univariate logistic regression analysis showed that a man treated with antioxidant therapy presented a probability to have a normal sperm count 20-fold ($OR=20.1$; $CI\ 95\%=1.05-43.2$; $P=0.014$) higher than a man who was untreated. No significant impact on spontaneous pregnancies was found after antioxidant therapy.

CONCLUSION: Despite this preliminary data, we show that antioxidant therapy based on a combination of NAC and micronutrient supplementation can be helpful in improve the sperm count at least in a subset of oligospermic males. However, this improving in sperm count is not associated with a significant increase in spontaneous pregnancies after 12 months.

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