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## Effect of treatment with myo-inositol on semen parameters of patients undergoing an IVF cycle: in vivo study.

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#### Abstract

**INTRODUCTION:** Myo-inositol (MI) is a precursor for the synthesis of phosphatidylinositolpolyphosphates (PIPs). The aim of the study is to evaluate the effect of its administration on semen parameters of male patients undergoing an in vitro fertilization cycles.

**METHODS:** In vivo study. Samples were semen of 62 patients divided into three different groups: healthy fertile patients (Group A); patients with oligoasthenospermia (OA) (Group B); control group (CTR). The collected samples were analyzed by optic microscopy in order to evaluate semen's volume, spermatozoa's number and motility before and after density-gradient separation method. These parameters were evaluated before and after administration of 4000 mg/die of MI and 400 µg of folic acid for 2 months. The results were analyzed statistically with Student's t-test.

**RESULTS:** After treatment there was a significant increase of basal and after density-gradient separation method spermatozoa concentration in Group B, and a significant increase of spermatozoa count after density-gradient separation method in Group A. The motility values were higher in healthy men than patients with OA before treatment, but there was no improvement in both groups after treatment.

**CONCLUSIONS:** Exogenous administration of MI significantly improves semen's parameters both in patients with OA and in normal fertile men.

**KEYWORDS:** Intra-cytoplasmic sperm injection; in vitro fertilization; myo-inositol; oligoasthenospermia; semen; spermatozoa