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TITLE

**SPERM FEATURES BEFORE AND AFTER OLIGO COMPONENTS MIXTURE ORALLY
ADMINISTERED OR DURING IN VITRO TREATMENT**

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ABSTRACT

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CONTEXT: Some mixture of oligoelements is specifically developed to reduce seminal plasma viscosity in normal and pathological semen samples, to improve the seed quality in the cases of oligoasthenozoospermia. Seminal plasma helps spermatozoa to penetrate the cervical mucus and an increase in viscosity can reduce fertilization rate. Despite extensive studies, the beneficial effects of these substances on male fertility are still unclear and controversial.

OBJECTIVE: To highlight the role of these substances on male fertility.

METHODS: We investigated the influence of Andrositol (A) on several aspects of sperm biology

PATIENTS: In the present study, we enrolled 30 non-azoospermic individuals: 10 men with proved fertility, used as normal control (NC) group, and 20 infertile men.

INTERVENTIONS: Among the 20 infertile men, 10 were orally treated with A, while in the other 10 patients directly the ejaculated sperm were treated with 2 mg/ml of A

MAIN OUTCOME MEASURES: The action of the A on seminal liquid parameters as well as on lipid and glucose metabolism in human sperm was evaluated.

RESULTS: Motility, viability evaluated also at molecular level by pAKT and pBcl2 WB analysis, capacitation-associated biochemical changes (i.e., cholesterol efflux), glucose and triglycerides content as well as lipase activity were improved after the treatment both in vivo and in vitro.

CONCLUSIONS: These findings may indicate a positive action after treatment with A in improving both the spermatogenesis and the procedures for artificial insemination in vitro, since it induces the fertilization potential of human male gamete.

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