Title: DETERMINE THE OPTIMAL ABSTINENCE FOR TESTING OF SEMINAL OXIDATIVE STRESS AND SPERM DNA DAMAGE IN INFERTILE MEN

Objective: Sperm quality is the cornerstone for male infertility diagnosis and management. Routine semen analysis requires 2-3 days abstinence time. We have introduced semen oxidative stress (OS) profile comprising of reactive oxygen species (ROS), total antioxidant activity (TAC) and DNA damage. Length of abstinence (shorter or longer than recommended) may affect these new OS assays. Our aim was to examine the effect of abstinence on OS scores in infertile men.

Design: Prospective study.

Materials and Methods: Patients were classified according to their abstinence time; short <2.0 days, normal 2-3 days or long > 3 days. Semen samples were collected from 101 infertile men and examined according to WHO 1999 guidelines. ROS, TAC, and DNA fragmentation were measured. OS scores were calculated by logistic regression analysis.

Results: High levels of sperm DNA fragmentation were observed in patients with long abstinence, while high score of TAC/TUNEL (indicating low OS) was observed in patients with short abstinence.

Comparison of oxidative stress markers in infertile patients with short,
Conclusions: The length of abstinence can affect the level of sperm DNA damage in infertile men. Sperm DNA integrity should be tested with an abstinence of 2-3 days.

Support: None.

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