

Poster presentation

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The effect of experimentally induced psychological stress on seminal parameters in healthy volunteers

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Background

Studies on the effects of psychological stress on male infertility have so far yielded equivocal findings [1,2]. The majority of these studies were based on subjective assessments of chronic stress. The aim of this study was to determine the effect of experimentally induced acute stress on seminal parameters.

Materials and methods

Twenty healthy postgraduate medical students produced two semen samples. The first sample was obtained in the lab after an acute stress-inducing task, and the second one at home. The acute stress inducing protocol was based on the Trier Social Stress Test [3].

Results

Semen volume was significantly higher after acute stress, compared to semen volume at home ($p=0.02$). Semen pH was significantly lower after acute stress, compared to semen pH at home ($p=0.039$). A trend was observed for grade of motility to be higher after acute stress, than at home ($p=0.059$).

Conclusions

This study was the first one to examine the effects of experimentally induced stress on semen parameters. The main limitation of the study concerns the small sample size. Findings suggest that exposure to acute stress influences

semen parameters, possibly due to an increase in prostatic secretions, with a possible improvement in seminal parameters important for fertilization.

References

1. Clarke RN, Klock SC, Geoghegan A, Travassos DE: **Relationship between psychological stress and semen quality among in-vitro fertilization patients.** *Hum Reprod* 1999, **14**:753-758.
2. Hjollund NH, Bonde JP, Henriksen TB, Giwercman A, Olsen J: **The Danish first pregnancy planner study team: Reproductive effects of male psychological stress.** *Epidemiology* 2004, **15**:21-27.
3. Kirschbaum C, Pirke KM, Hellhammer DH: **The Trier Social Stress Test - a tool for investigating psychobiological stress responses in a laboratory setting.** *Neuropsychobiology* 1993, **28**:76-81.