Article

Asthenozoospermia and Fertility

Tarek S.E, Mhmoud H M., Ahmed F. A and Hisham S.A
Department of Dermatology, STDs and Andrology, Faculty of Medicine, Minia University, Egypt

Abstract

Background: Asthenozoospermia is a condition associated with low or absence sperm motility in fresh ejaculate. Absolute asthenozoospermia, i.e. 100% immotile sperm, is reported in 1 of 5000 men. Many factors may cause impairment of sperm motility (asthenozoospermia) leading to infertility

Objectives: The aim of the present study is to define effect of low sperm motility on fertility.

Methods: The study was conducted on 20 males with age ranging from 20 to 50 years. Semen analysis was done in all patients. They were divided into two groups: Group I (control): 5 fertile persons with normal motility. Group II: patients with asthenozoospermia. Results: There was a statistically significant decrease of mean fertility rate in patients with low total sperm motility.

Conclusion: Asthenozoospermia is a major cause of infertility.

Keywords: Asthenozoospermia, Fertility.

Introduction

Asthenozoospermia is a condition associated with low or absence sperm motility in fresh ejaculate. Absolute asthenozoospermia, i.e. 100% immotile sperm, is reported in 1 of 5000 men (Eliasson et al., 1977).

During natural sperm maturation, motility is acquired during epididymal transit. Sperm motility is important for migration from the vagina to the Fallopian tubes, for penetration of the cumulus oophorus and for processes involved in fertilization. Therefore, there is a clear association between sperm motility and the chance for natural conception (Bacetti et al, 2001).

Andrologist is confronted with male genital infection as a common occurrence in subfertile men (WHO, 1997). This is related to possible direct effects of male genital infection on fertilizing capacity of the sperm, but is probably also due to effects of male genital tract infection on female partner (Eggert-kroese et al., 1997).

Ultrastructure abnormalities of the sperm tails are most important cause of absolute asthenozoospermia they result from defect in spermiogenesis (Zamboni, 1987; Bacetti et al., 1993) with viable but immotile spermatozoa present in the ejaculate. Many ultrastructure defects may have a genetic origin (Afzelius, 1981).
Postgraduate Studies and Research of Faculty of Medicine, Minia University.

The age of subjects included ranged from 20 to 50 years old. All groups were subjected to; complete history taking, general and local examination, semen sample collection and preparation. Semen sample were collected by masturbation into sterile plastic jars, after 3-5 days of sexual abstinence. They were allowed to liquefy for 20-40 min at incubators (37°C) and were then evaluated according to WHO guide lines (WHO, 2010). The liquefied semen samples were evaluated for: total sperm count (x10⁶), motility (%): total motility and progressive motility and morphology (%).

They were divided after examination and seminal analysis into 2 groups: Group I (control): 5 fertile persons with normal Group II: patients with low motility.

Statistical analysis
Data were statistically analyzed using SPSS program for windows, version 24. The statistical difference between groups was expressed in p value which was considered significant when it was < 0.05.

Results
The control group represents 31.25% of cases, while patients with asthenozoospermia represent 68.75% of cases. The study includes 20 patients, whose age ranges between 20-45 years with a mean of 28.4 ± 5.3 years.

There was a statistically significant difference of fertility rates between patients of low sperm motility and controls.

Discussion
Asthenozoospermia considered a major cause of male infertility (Paduch and Niedzielski, 1997). This study showed that sperm motility is significantly lower in men complaining from infertility.

References