VARYING PATTERNS OF SPERMIOGRAMS IN MEN EVALUATED FOR INFERTILITY: A RETROSPECTIVE REVIEW OF 693 INFERTILITY CASES

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Introduction and Objective: In majority of cases, the diagnosis of male-factor infertility is based on repetitive abnormal semen analyses results. However, there is a lack of consensus as to the incidence of different sperm abnormalities among infertile men. The objective of this study was to investigate the incidence of various abnormalities of sperm characteristics in a cohort of men undergoing infertility testing.

Methods: We examined the spermiograms of a non-selected group of infertile men (n = 693) who were evaluated at our laboratory during 2000. All participants underwent standard semen analysis according to WHO guidelines (WHO, 1999) to determine sperm concentration and motility. Stained semen smears were examined for sperm morphology using Kruger's strict criteria. All samples were collected in the andrology lab after 2 to 3 days of sexual abstinence, and examined by the same observer.

Results: 169/693 (24.4%) of patients were normozoospermic. All parameters were abnormal (oligoasthenoteratozoospermia) in 192/693 (27.7%). A solitary abnormality was found in the spermiograms of 172/693 (24.8%) of the patients teratozoospermia in 18.2%, oligozoospermia in 3.3%, and asthenozoospermia in 3.3%. Sperm morphology (median and interquartile range (25% & 75%)) in the teratozoospermic group was 8% (5%, 10%). Sperm concentration in the oligozoospermic group was 9.6 (0.12, 19) X10^6/mL. Sperm motility in the asthenozoospermic group was 37% (15%, 45%). Oligoasthenoteratozoospermia was found in 36/693 (5.2%) of cases, oligoteratozoospermia in 39/693 (5.6%) and asthenoteratozoospermia in 85/693 (12.3%). Of the 524 patients with abnormal sperm parameters, 442 (84%) were teratozoospermic.

Conclusions: Our study indicates that approximately one fourth of men evaluated for infertility are normozoospermic based on WHO guidelines. This indicates the futility of the WHO parameters in predicting a man's fertility potential. Abnormal sperm morphology was the most common finding in the patients with abnormal spermiograms. Based on this, we speculate that the majority of infertile men may suffer a defect in spermiogenesis rather than in sperm production.

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