Semen analysis: Role of age and varicocele

Andrade-Rocha performed a very interesting study showing that varicocele harms equally the sperm characteristics of adolescents, adults and older men.\(^1\) Apparently, it affects sperm quality more adversely than it does sperm production. Men with varicocele have poorer semen quality than fertile men with no varicocele and the percentage of morphologically normal sperm and combined anomalies prove to be the best parameters, showing the highest predictive power for abnormal sperm quality due to deleterious effects of varicocele. However, recently we showed that in normal fertile men, irrespective of the presence of varicocele, based on linear regression analysis, semen volume, sperm concentration and motility were found to decrease by 0.01 ml, 2.1% and 0.27%, respectively, per year and the FSH level to increase by 0.27%.\(^2\) Interestingly, in our study, sperm concentration and motility decrease and FSH levels increase over time. Normal sperm morphology decreases...
after 45 years of age. In another study, following the evaluation of 889 patients requesting vasectomy for sterilization purposes, we observed low sperm motility and morphology in men who request a vasectomy for sterilization purposes as compared to WHO parameters. Thus, the aging effect should be taken into consideration when proposing standard values for semen characteristics in routine semen analysis. We argue that the difference between the studies may be due to the small size in the study of Andrade-Rocha.

A decrease in semen quality, not only in sperm concentration and percent motility, but also in morphologically normal spermatozoa is often found in infertile men with varicocele. In our series of patients, sperm concentration and percent motility was lower in infertile men with varicocele than in fertile men with or without varicocele.

In addition, sperm motility was lower in infertile men with varicocele than in fertile men with or without varicocele. Also, no differences were detected in sperm concentration and sperm motility in the fertile group, irrespective of the presence of varicocele.

This data is of clinical importance because it shows that the presence of a clinical varicocele does not rule out fertility in men. Varicocele may cause damage to the testicles but not in all cases. The decision for performing a varicocelectomy should be tailored according to the semen profile and not according to the presence or otherwise of this clinical entity.

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References