

## البحث السادس

### **Role of sequential semen samples in infertile men candidates for assisted reproduction: A prospective study**

**Objective:** To study the beneficial effect of repeated sequential ejaculation in infertile men who are candidates for assisted reproduction.

*Materials and methods:* The study included a total of 237 infertile males attending our infertility and IVF center from January 2016 till December 2017. All patients were asked to provide two semen samples (1–3 h apart) after an abstinence period of 3–7 days. The two consecutive semen samples were analyzed according to the 2010 WHO criteria for semen analysis and their parameters were compared.

**Results:** The mean age for our study group was 35.7 years (20–56 year). Of the 237 subjects, 157 showed oligoasthenozoospermia on their initial semen sample while the remaining 80 were azoospermic. A statistically significant difference was detected between the 2 sequential semen samples regarding all semen parameters except grade A motility. Despite the significant decrease in seminal volume by sequential sampling, there was a statistically significant increase in sperm concentration in the second ejaculate compared to the first ( $6.2 \pm 0.61$  versus  $3.4 \pm 0.52$  million/mL, respectively,  $p = 0.016$ ). The mean normal sperm morphology also demonstrated a significant increase ( $2.1 \pm 1.8$ – $5.1 \pm 2.6\%$ ,  $p < 0.002$ ). Mean progressive sperm motility increased from  $1.13 \pm 0.31$  to  $1.7 \pm 0.31\%$  ( $p = 0.010$ ) on repeated sampling. Also, we were able to retrieve viable sperm in 15% of the of the azoospermic patients whom were known to be azoospermic on previous occasions.

**Conclusions:** Obtaining consecutive semen samples leads to improvements in the quality of many semen parameters (sperm concentration, motility and morphology) which may be of special importance for management of infertile couples especially those attempting assisted techniques.

