MALE FACTOR

Effect of cell phone usage on semen analysis in men attending infertility clinic: an observational study

Ashok Agarwal, Ph.D., H.C.L.D.,[a] *Fnu Deepinder, M.D.,*[a] *Rakesh K. Sharma, Ph.D.,*[a] *Geetha Ranga, Ph.D.,*[b] *and Jianbo Li, Ph.D.*[c]

[a] Reproductive Research Center, Glickman Urological Institute and Department of Obstetrics-Gynecology, Cleveland Clinic Foundation, Cleveland, Ohio; [b] Karthekeya Medical Research and Diagnostic Center, Mumbai, India; and [c] Department of Quantitative Health, Cleveland Clinic Foundation, Cleveland, Ohio

Objective: To investigate the effect of cell phone use on various markers of semen quality.
Design: Observational study.
Setting: Infertility clinic.
Patient(s): Three hundred sixty-one men undergoing infertility evaluation were divided into four groups according to their active cell phone use: group A: no use; group B: <2 h/day; group C: 2–4 h/day; and group D: >4 h/day.
Intervention(s): None.
Main Outcome Measure(s): Sperm parameters (volume, liquefaction time, pH, viscosity, sperm count, motility, viability, and morphology).
Result(s): The comparisons of mean sperm count, motility, viability, and normal morphology among four different cell phone user groups were statistically significant. Mean sperm motility, viability, and normal morphology were significantly different in cell phone user groups within two sperm count groups. The laboratory values of the above four sperm parameters decreased in all four cell phone user groups as the duration of daily exposure to cell phones increased.
Conclusion(s): Use of cell phones decrease the semen quality in men by decreasing the sperm count, motility, viability, and normal morphology. The decrease in sperm parameters was dependent on the duration of daily exposure to cell phones and independent of the initial semen quality. (Fertil Steril® 2008;89:124–8. ©2008 by American Society for Reproductive Medicine.)

Key Words: Cell phone, electromagnetic radiations, sperm parameters, male infertility