OXIDATIVE STRESS IN INFERTILE VARICOCELE MEN
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Aims
The aim of our study was to compare the semen quality and the seminal oxidative stress (ROS-TAC score) in infertile men with varicocele with normal donors (controls) and to a known group of fertile and infertile men treated for their infertility.

Methods
Principal component analysis was applied to different semen characteristics to provide a standardized score in 21 infertile men with varicocele and 17 controls attending our infertility clinic. Reactive oxygen species (ROS) and total antioxidant capacity (TAC) score (ROS-TAC score) was formulated using principal components to predict fertility potential in these men. A logistic regression analysis comparing the fertile (n = 13) and infertile (n = 39) men (treated male factor cases) was used to provide estimates of fertility based on the ROS-TAC score.

Results
Compared to controls, infertile patients had significantly lower sperm concentration (37.0 ± 5.9 vs. 69.4 ± 9.1; P = 0.003), sperm motility (35.6 ± 3.5 vs. 55.5 ± 4.9; P = 0.002), and normal morphology according to the WHO criteria (30.6 ± 2.8 vs. 39.8 ± 2.5; P = 0.07). Patients with varicocele had lower semen quality scores (81.7 ± 10.5) than controls (98.9 ± 10.3); (P = 0.002).

Infertile varicocele patients had significantly lower ROS-TAC scores (41.7 ± 13.1) than controls (51.3 ± 9.9) (P = 0.03). An estimated 14-43% of men with varicocele will remain infertile during one-year follow-up.

Conclusions
Semen and ROS-TAC scores provide important information that may be used on the medical management of infertile patients with varicocele.