

[J Urol.](#) 2012 Jan;187(1):222-6. Epub 2011 Nov 17.

Predictors of sperm recovery and azoospermia relapse in men with nonobstructive azoospermia after varicocele repair.

[Abdel-Meguid TA.](#)

Department of Urology, King Abdulaziz University Medical City, Jeddah, Saudi Arabia, and El-Minia University, El-Minia, Egypt.

Abstract

PURPOSE:

In this study we determined the recoverability and sustainability of motile sperm in semen of men with nonobstructive azoospermia after varicocelectomy as related to different variables.

MATERIALS AND METHODS:

Men with documented infertility for more than 1 year, with nonobstructive azoospermia and clinically palpable varicoceles were included in this prospective noncontrolled study. Participants underwent simultaneous subinguinal microsurgical varicocelectomy and testicular biopsies. Preoperative as well as initial and late followup semen analyses were performed. Outcomes of sperm recovery and relapse of azoospermia were correlated with the variables of patient age, infertility duration, varicocele grade, laterality, follicle-stimulating hormone, testicular volume and testicular histology.

RESULTS:

The study included 31 men with a mean \pm SD age of 34.9 ± 8.7 years and mean followup of 19.3 ± 3.3 months. Hypospermatogenesis, late maturation arrest, early maturation arrest and Sertoli-cell-only were observed in 13, 6, 2 and 10 patients, respectively. Overall, sperm recovery was evident in 10 of 31 (32.3%) patients (persistent recovery 19.4%, intermittent recovery 6.5%, relapse 6.5%). Sperm were recovered in patients with hypospermatogenesis (7 of 13, 53.8%) and late maturation arrest (3 of 6, 50%). No sperm were recovered in those with early maturation arrest or Sertoli-cell-only. Among the variables only histological patterns demonstrated a significant correlation with recovery ($\rho = 0.504$, $p = 0.004$). None of variables was significantly correlated with relapse. Bilateral varicocele repair demonstrated a strong yet nonsignificant negative correlation with relapse ($\rho = -0.612$, $p = 0.06$).

CONCLUSIONS:

Varicocelectomy could recover motile sperm in men with nonobstructive azoospermia, palpable varicoceles and hypospermatogenesis or late maturation arrest. No sperm was recovered with early maturation arrest or Sertoli-cell-only. Recovery might be persistent or intermittent, or

involve relapse of azoospermia. Testicular histology was the sole parameter significantly correlated with recovery and no predictors of relapse could be identified. This prognostic role of testicular biopsy is imperative in couple counseling.