Male factors determining the outcome of intracytoplasmic sperm injection with epididymal and testicular spermatozoa.

During a period of 8 years, 1,079 intracytoplasmic sperm injection (ICSI) procedures with aspirated epididymal or testicular spermatozoa were performed. Epididymal spermatozoa were used in 172 cycles and testicular spermatozoa or spermatids in 907 cycles. Multiple biopsies were obtained from at least two different locations in the testes. Retrieved spermatozoa were used after cryopreservation (frozen) or immediately after aspiration (fresh). Three hundred patients had obstructive azoospermia (OA) or ejaculation failure. In 414 cases, azoospermia was caused by impaired spermatogenesis resulting from maldescended testes, chemotherapy/radiotherapy, or by Sertoli-cell-only syndrome, genetic disorders or unknown aetiology. Transfer rates, pregnancy rates and birth rates per ICSI cycle showed no statistically significant differences between testicular and epididymal spermatozoa in men with OA (28% average birth rates in both cases). However, birth rates differed significantly with regard to the status of spermatogenesis. Treatment of men with nonobstructive azoospermia (NOA) resulted in a birth rate of 19% per cycle. In all patient groups, there was no difference in the birth rates achieved with fresh and cryopreserved spermatozoa. While testicular volume, follicle-stimulating hormone level and...
age of the male patient are no statistically significant prognostic factors, the underlying cause of azoospermia is the most important factor determining the outcome of ICSI with epididymal and testicular spermatozoa. The pregnancy rate is lower in NOA patients than in those with OA.