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JOURNAL ARTICLE

In vitro fertilization with intracytoplasmic sperm injection is an effective therapy for male factor infertility related to subnormal hypo-osmotic swelling test scores

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The aim of the study was to determine if intracytoplasmic sperm injection (ICSI) would be an effective therapy for mates with subnormal hypo-osmotic swelling test (HOST) scores, a condition known to prevent implantation of embryos despite allowing normal fertilization and embryo formation. Couples in whom the male partner had a HOST score of <50% and failed to achieve a pregnancy despite at least 3 cycles of intrauterine insemination with chymotrypsin-galactose-treated sperm were treated with in vitro fertilization (IVF) with ICSI. The clinical and viable pregnancy rates were 49.0% and 45.3% (n = 53). The implantation rate was 27.1%. These data thus demonstrate that ICSI is an effective therapy for infertile couples in whom the male partner has a subnormal hypo-osmotic swelling (HOS) score. Previous studies using conventional IVF without ICSI when HOS was subnormal found normal fertilization rates but a marked reduction in pregnancy and implantation rates. The very acceptable pregnancy and implantation rates demonstrated in this study with ICSI is consistent with the hypothesis that the defect associated with sperm that have subnormal HOST scores is not related to the single spermatozoon that is responsible for fertilizing the oocyte but may be related to a toxic factor associated with the supernumerary sperm attached to the zona pellucida.

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