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The Utility of Optical Loupe Magnification for Testis Sperm Extraction in Men With Nonobstructive Azoospermia

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The testis of patients with nonobstructive azoospermia (NOA) harbors sperm in approximately 30% to 60% of cases. Use of an operating microscope has been shown to result in better sperm retrieval rates. This investigation was undertaken to evaluate the ability of a modified microsurgical approach using magnifying loupes (3.5x) to improve the rates of sperm retrieval during testis sperm extraction (TESE). The study group consisted of patients with NOA who underwent TESE. Before December 1998, TESE was conducted in a standard fashion, and from 1999 on, loupe magnification was used. Comparison was made between the 2 groups with regard to sperm retrieval rates, need for bilateral TESE, and number of tunical incisions. Overall sperm retrieval rates did not differ between the 2 groups (45% vs 50%). However, in patients with testicular volumes of 10 mL or less, patients who underwent standard TESE had a retrieval rate of 27% compared with 42% when using the optical loupe magnification ($P = .025$). The use of loupe magnification may permit surgeons without access to or experience using an operating microscope to obtain better rates of sperm retrieval in men with NOA who have testicular volumes of 10 mL or less.

Key words: Male infertility, intracytoplasmic sperm injection

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