

Microdissection testicular sperm extraction causes spermatogenic alterations in the contralateral testis

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ABSTRACT. Testicular sperm extraction (TESE) associated with intracytoplasmic sperm injection has allowed many men presenting non-obstructive azoospermia to achieve fatherhood. Microdissection TESE (microTESE) was proposed as a method to improve sperm retrieval rates in these patients; however, there have been failures. Little is known about whether microTESE leads to spermatogenic alterations in the contralateral testis. We assessed histological outcomes of experimental microTESE in the contralateral testis of adult male rabbits. Nine adult male rabbits were divided into three groups: control (testicular biopsy to observe normal histological and morphometric values), sham (incision of the tunica vaginalis, and a contralateral testicular biopsy to observe histological and morphometric patterns, 45 days later), and study (left testicular microTESE, and a right testicular biopsy to observe

histological and morphometric patterns, 45 days later). Sections were assessed by calculating Johnsen-like scores, and measuring total tubule diameter, lumen diameter and epithelial height. The results were compared using ANOVA and Bonferroni's statistical analysis. Morphometric evaluation of the seminiferous tubules did not demonstrate differences between the three groups. However, microTESE caused spermatogenic alterations, leading to maturation arrest in the contralateral testis.

Key words: Testis biopsy; Microdissection; Seminiferous tubules; Surgery