Abstract

Objective: evaluating ICSI outcome using testicular spermatozoa in patients having non-obstructive azoospermia according to the histological finding of a previous testicular biopsy. Design: retrospective and transversal study. Patients and methods: we evaluated the laboratory outcome and clinical results of 59 couples undergoing 79 ICSI cycles with testicular sperm retrieval. These patients were divided into three groups according to testicular histology (hypospermatogenesis, maturation arrest and germ cell aplasia) revealed in biopsy prior to ICSI. The ICSI was compared to the other groups. Results: the most frequent testicular histological finding was hypospermatogenesis (61%), followed by maturation arrest (22%) and germ cell aplasia (17%). Sperm recovery and oocyte fertilisation were higher in the hypospermatogenesis group (p < 0.01) than in maturation arrest (50% and 40.7%) and germ cell aplasia (21.4% and 36.8%). Embryo cleavage was higher in patients having hypospermatogenesis (95.9%) followed by maturation arrest (87.5%) and germ cell aplasia (71.4%) (p = 0.001). The groups presented no difference in embryo development. Total clinical pregnancy rate per ICSI cycles and per cycles with embryo transfer were 25.3% and 37.7%, respectively. Conclusions: testicular biopsy has clinical value when counselling infertile couples. Although patients with hypospermatogenesis returned the best results, sperm recovery and oocyte fertilization are possible, even in cases where no spermatozoa were found in testicular biopsy.

Keywords

Infertility, ICSI, azoospermia, testicular histology.