Obtaining Sperm from More than 12 ml Testicular Volume

Introduction and Objective: Micro-dissection testicular sperm extraction (TESE) is usually the standard operation for non-obstructive azoospermia (NOA) patients. We previously established, according to histological evaluation of testicular biopsy sample, the correlation between the serum FSH level and average testicular volume. In this paper, we detected sperm from the testicular biopsy sample in all patients with more than 12ml testicular volume before micro-dissection TESE. We estimated the patients who received micro-dissection TESE with greater than 12ml testicular volume.
Materials and Methods: We performed micro-dissection TESE for 106 NOA patients from 2004 to 2010. Eighteen patients of 106 had greater than 12ml testicular volume. We classified these patients into two groups. One group was the sperm plus (SP+) group, in which we obtained the sperm in micro-dissection TESE. Eight patients were in the SP+ group. The other group was the sperm minus (SP-) group, in which we did not obtain sperm in micro-dissection TESE. Ten patients were in the SP- group. We estimated patient's age, the data of serous hormone, and spermatogenesis of testicular tissue by hematoxylin-eosin staining between SP+ and SP-.
Results: The results are shown as SP+: SP-, respectively. Age (years) 31.3: 33.1; testicular volume (ml) 15.6:14.4; luteinizing hormone (mIU/ml) 5.1: 5.5; follicle-stimulating hormone (mIU/ml) 23.5: 22.2; prolactine(ng/ml) 8.8: 16.4; testosterone (ng/ml) 4.36:5.26; free-testosterone (pg/ml) 7.8: 9.5; and Johnsen score 6.8: 2.5. Prolactine and Johnsen score were significantly different. In the SP- group, 9 patients had a Johnsen score of 2.
Conclusion: In these data, almost all SP- patients had a Johnsen score of 2, and there were no germ cells, and Sertoli cell only (SCO) in the testis. Therefore, we need immediate therapy for SCO.