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لم ترد بالأصل

The Value of Microsurgical Testicular Sperm Extraction in Functional Azoospermia

Thesis

Submitted for partial fulfillment of
M.D. degree in Andrology and STDs

By

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ABSTRACT

In this work, our first aim is to verify the value of the newly introduced approach of microdissection TESE in patients with functional azoospermia and to evaluate its pathological consequences compared with open, classic surgical biopsy in the same patient. Our second aim is to establish some clinical and non invasive laboratory parameters to predict sperm detection difficulty in order to select the proper surgical technique. One hundred and sixty eight azoospermic patients were included in this study. According to TESE procedure the patients were divided into 2 groups: In group A (n=116) patients underwent test TESE via taking a diagnostic samples and group B (n=52) patients underwent therapeutic TESE procedure via taking multiple microsurgical and conventional samples. In group (A) 100 patients with bilateral identical testicular histology the spermatozoa recovery rate by microdissection TESE was significantly higher than by conventional TESE, 47/100 (47%) versus 30/100 (30%) ($P < 0.05$). In order to assess the safety of this new procedure, sixty patients were followed up ultrasonographically for 1, 3 and 6 months. Acute and chronic complications were significantly lower in the microsurgical side compared to the conventional side, 9/60 (15%) versus 35/60 (58.3%) and 2/60 (3%) versus 18/60 (30%) ($P < 0.05$) respectively. In group (B) TESE with microdissection and conventional open surgical methods 4 hours before ovum pick up gave a sperm recovery rate (SRR) of 31/52 (59.6%). According to difficulty encountered during TESE, patients were classified into two subgroups (B1 and B2). In subgroup B1 (34 patients) TESE was difficult and necessitated multiple bilateral samples SRR was 13/34 (38.2%). While in subgroup B2 (18 cases) one or two small microsurgical samples were sufficient to retrieve motile sperm in all patients (SRR =100%). The difference in SRR between the 2 subgroups couldn't be attributed to specific histopathologic pattern, FSH or testicular volume. Our results suggest that microdissection TESE is not devoid of complications, but, it is relatively safer than the conventional technique and improves sperm yield significantly in patients with NOA. Difficult sperm retrieval should be expected in older age groups with long infertility duration and if no spermatids are present in the ejaculate.

Key words: azoospermia/ MGG stain/ microsurgical biopsy/ sperm retrieval/ testicular sperm extraction

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Contents

	<u>Page</u>
List of Abbreviations	
List of Images and Photographs	
List of Tables	
Introduction	1
Aim of The Work	3
Review of literature	
• <i>Functional Azoospermia</i>	4
• <i>Testicular biopsy</i>	20
• <i>Surgical Sperm Recovery in Azoospermic Patients</i>	33
• <i>Predictive Factors for Successful TESE</i>	46
• <i>Scrotal Sonography</i>	61
Patients and Methods	80
Results	86
Discussion	98
English Summary	109
References	112
Arabic Summary	

