Histomorphological Patterns of Testicular Biopsies in Azoospermic Infertile Males from a Tertiary Care Unit of Pakistan


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ABSTRACT
**Objectives:** The objective of this study was to find out the most prevalent histological phenotype in azoospermic testis in those infertile men who presented with lab diagnosis of azoospermia and to compare our data with international studies.

**Study Design:** Cross Sectional Hospital Based Study

**Place and Duration of Study:** This study was conducted at Anatomy Department, SMU, Karachi for duration of one year from January 2010 till January 2011

**Materials and Methods:** This study was carried out in 100 men with azoospermia, going for a trial of ICSI. All underwent Testicular Sperm Extraction (TESE) for the retrieval of sperm for ICSI and for histopathological diagnosis.

**Results:** The mean age of the studied group was 36.64 ± 5.217 years with 33.62 years as the lower limit and 35.66 years as the upper limit of 95% confidence interval. Body mass index was also calculated after height and weight measurement, which was observed as 28.22 ± 7.12 kg/m² with 26.83 as the lower limit and 29.61 as the upper limit of 95% of confidence interval.

The microscopic assessment of testicular biopsy showed that normal spermatogenesis was found to be in 25% of cases, showing normal tubular diameter with the presence of all stages of spermatogenesis. 31% of testicular biopsies showed hypo-spermatogenesis, characterized by reduced population of germ cells seen in the tubules and alteration in the order of spermatogenesis. Maturation arrest was seen in 17% of cases, evident by a halt of maturation sequence, at the stage of primary spermatocyte. Abundant cells in division were visible but no spermatid or spermatozoa were seen. Sertoli cell only was apparent in 17% of cases in which the tubules were populated with by only sertoli cells with the complete absence of germ cells. Generalized fibrosis was seen in 13% of cases which showed the atrophic tubules had a thickened, convoluted basement membrane with a hyaline appearance surrounding a lumen obliterated by fibrous tissue.

**Conclusion:** Hypospermatogenesis was found to be the commonest pattern in testicular biopsies of studied population. This study supports the recommendation of bilateral testicular biopsies when investigating male infertility.
Key Words: Intracytoplasmic sperm injection, Body mass index, Hypospermatogenesis, Male infertility, Testicular biopsy.

REFERENCES


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