Title: HISTOPATHOLOGICAL PATTERNS OF TESTICULAR BIOPSIES IN INFERTILE AZOOSPERMIC MEN WITH VARICOCELES

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Objective: Azoospermia is present in 1% of all men and up to 15% of infertile men. Prevalence of varicocele in azoospermic men ranged between 5 to 10%. The goal of this study was to determine the histopathological patterns of testicular biopsies (TB) in infertile azoospermic men with varicoceles.

Design: Prospective clinical study.

Materials and Methods: The study included 37 infertile azoospermic men with bilateral grade 1 to 3 varicoceles. Diagnosis of varicocele was confirmed by scrotal color Doppler ultra-sound. Serum levels of follicle stimulating hormone (FSH) were measured. Open surgical TB was performed. Specimens were preserved in Bouin’s solution. Slides were prepared for microscopic exam.

Results: Complete spermatogenesis with disorganization, sloughing and low to moderate sperm scores was found in 11/30 (30%) (Group1). Arrested spermatogenesis was found in 14/37 (38%) (Group 2). In group 2, primary spermatocytes were detected in 9 cases and spermatid in 5. Germ cell aplasia and Sertoli cell only pattern were found in 12/37 (32%) (Group3). Comparison of age, FSH and testicular volume between groups is shown in the Table.
Comparison between 3 study groups

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Group 1 (n=11)</th>
<th>Group 2 (n=14)</th>
<th>Group 3 (n=12)</th>
<th>P value (1 vs. 2)</th>
<th>P value (1 vs. 3)</th>
<th>P value (2 vs. 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (yrs)</td>
<td>38 ± 8</td>
<td>33 ± 5</td>
<td>32 ± 6</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>FSH (mIU/mL)</td>
<td>15 ± 3</td>
<td>16 ± 2</td>
<td>18 ± 5</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Rt testis volume (mL)</td>
<td>19 ± 3</td>
<td>16 ± 2</td>
<td>13 ± 3</td>
<td>0.04</td>
<td>0.001</td>
<td>NS</td>
</tr>
<tr>
<td>Lt testis volume (mL)</td>
<td>20 ± 2</td>
<td>16 ± 3</td>
<td>13 ± 2</td>
<td>0.04</td>
<td>&lt;0.0001</td>
<td>0.04</td>
</tr>
</tbody>
</table>

Values are mean ± SD. P value <0.05 was significant. NS = not significant

Conclusions: Testicular biopsy has important diagnostic and prognostic value in the management of azoospermic men with varicoceles. Based on results of TB, varicocelectomy can be offered to men with complete spermatogenesis after excluding obstruction. Future research is warranted to show whether azoospermic men with different testicular pathologies will benefit from varicocelectomy or not.

Support: None

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