Intravesical instillation of sodium hyaluronate after acute cystitis for prevention of recurrent UTIs

Mirkin Y¹, Bedretdinova D², Smirnov G³, Eizenakh I⁴

1. URO-PRO clinic, 2. Central Institute of Urology, Moscow, 3. MKC Laboratories, Moscow, 4. NMT Bioresarch

Hypothesis / aims of study

Acute cystitis is most common “female” disease in urology. More than 1 500 000 cases of acute bacterial cystitis registered in Russia every year. Usually, acute uncomplicated UTIs is easy to treat. However, 20 – 40% of patients have recurrent UTIs during year after first case of cystitis. Some studies showed that impairment of glycosaminoglycan layer lead to recurrent urogenital tract infection.

Hyaluronic acid along with chondroitine sulphate and heparan sulphate is important component of protective barrier of the urothelium. We suggested that recovery of GAG-layer may prevent recurrence of bacterial cystitis after first attack of acute cystitis.

Study design, flow-chart and methods

Randomized one-centre controlled clinical trial

Results

<table>
<thead>
<tr>
<th>Parameters</th>
<th>I group (control)</th>
<th>II group (sodium hyaluronate)</th>
<th>test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of pts with UTIs</td>
<td>16 pts</td>
<td>5 pts</td>
<td>p &lt; 0.05*</td>
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<tr>
<td></td>
<td>(19.28%)</td>
<td>(6.17%)</td>
<td></td>
</tr>
<tr>
<td>Duration of case (days)</td>
<td>5.4 +/- 1.3</td>
<td>1.9 +/- 0.8</td>
<td>p &lt; 0.05**</td>
</tr>
<tr>
<td>Intensity (VAS)</td>
<td>6.1 +/- 1.4</td>
<td>3.0 +/- 0.8</td>
<td>p &lt; 0.05**</td>
</tr>
</tbody>
</table>

- Pearson chi-square test
- unpaired t-test

There was significant difference between two groups of patients. Intravesical administration of sodium hyaluronate for recovery of protective barrier of urothelium after acute cystitis lead to prevent recurrent UTIs, decrease of duration and intensity of cystitis cases.

FOLLOW-UP 1 year

- number of patients who had recurrent UTIs (at least 3 cases per year);
- duration of case;
- intensity of pain (Visual Analog Scale)

67 – no UTI
16 - UTI
76 – no UTI
5 – UTI

Conclusion

We need double-blind multicentre RCT for confirmation of efficiency of this method. However, this method showed great promise for prevention of recurrent UTIs.

Author’s contact:
Yakov Mirkin

e-mail mirkom@yandex.ru
+7(495)210-92-19