We investigated the endocrinological effects of pretreatment with chlormadinone acetate (CMA) in preventing the initial testosterone surge induced by a luteinizing hormone-releasing hormone (LH-RH) analogue. A total of 25 patients with previously untreated prostate cancer were included in this study. The patients were randomly assigned to 2 treatment groups: Group 1; CMA therapy was begun 4 weeks before the initial LH-RH analogue injection. Group 2; CMA therapy was begun 2 weeks before the initial LH-RH analogue injection. After the initial LH-RH analogue injection, CMA was administered during this study. After LH-RH analogue application, the mean values of serum luteinizing hormone (LH) and testosterone increased in both groups on day 3. However, LH and testosterone levels remained beneath pretreatment values in both groups. The mean relative PSA levels did not significantly increased on day 3 and day 7 in both groups. Our results indicate that pretreatment with CMA for 2 weeks was sufficient to prevent the initial testosterone surge in the maximal androgen blockade which was associated with CMA. J. Med. Invest. 46 : 55-58, 1999

Key words: Prostate cancer, Luteinizing hormone-releasing hormone analogue, Disease flare, Chlormadinone acetate
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<table>
<thead>
<tr>
<th>Group 1</th>
<th>Group 2</th>
<th>N.S.</th>
<th>N.S.</th>
<th>N.S.</th>
</tr>
</thead>
</table>

LH

Testosterone

Group 1 vs. Group 2  N.S.  N.S.  N.S.  N.S.
PSA (relative value)

Group 1 vs. Group 2

p<0.05 N.S. N.S.
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