Hypnotic drug withdrawal: before or after psychophysiological treatment of chronic insomnia?

KLUFT C., KERKHOF G.A., DE WEERD A.W.
CENTER FOR SLEEP AND WAKE DISORDERS, MCH WESTEINDE HOSPITAL, THE HAGUE, THE NETHERLANDS

Introduction
Most insomnia patients actually believe that their sleep and daytime functioning will improve as soon as they start hypnotic medication (Kripke 2000). Once started, most of these patients use hypnotic drugs chronically on a daily basis. Recent research has provided evidence that chronic use of hypnotic medication in insomnia only worsens sleep and may even lead to depression (Kripke 2000, Foley et al. 1999, Morin et al. 1999, Breslau et al. 1996). Preferably, pharmacological treatment of insomnia is a temporary treatment and not intended as a life time solution for insomnia. It should at least be supported by or even completely replaced by psychophysiological (=non-pharmacological) treatment (Morin et al. 1999).

Psychophysiological treatment has two objectives: firstly, the application of cognitive and behavioral techniques to improve sleep and secondly supporting patients during the withdrawal of hypnotics.

Based on clinical observations, we hypothesized that pre-treatment drug withdrawal would be beneficial for the self-reported efficacy of psychophysiological treatment. Therefore we explored this efficacy retrospectively by comparing patients who started before with patients who started after withdrawal of hypnotic medication.

Patients
Only patients with primary insomnia where considered for this study. We compared 3 patients who withdrew their hypnotic medication before receiving psychophysiological treatment (pre-treatment withdrawal) and 3 patients who withdrew afterwards (post-treatment withdrawal) in terms of the number of sessions needed for successful treatment. Table 1 shows several characteristics of the patients.
Design of treatment

In all cases psychophysiological treatment consisted of behavioral therapy (sleep hygiene, sleep restriction, stimulus control therapy, relaxation training) and cognitive therapy in a treatment protocol. Treatment in itself is always tailored to each individual patient. Temporal treatment order for the two groups is shown in figure 1. Table 2 shows some of the treatment parameters. Completion of treatment was reached when a patient was completely withdrawn from hypnotic medication and showed a sleep improvement compared to baseline that lasted longer than 4 weeks and reported a sleep efficiency of at least 85% with a duration of at least 4 weeks.

Table 1: Patient characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Patient 1</th>
<th>Patient 2</th>
<th>Patient 3</th>
<th>Patient 4</th>
<th>Patient 5</th>
<th>Patient 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
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<td>F</td>
<td>M</td>
<td>M</td>
<td>F</td>
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<td>Social worker</td>
<td>Employee Airport Cargo Services</td>
<td>Housewife</td>
<td>Housewife</td>
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<td>Temazepam 20 mg</td>
<td>Flunitrazepam 1 mg</td>
<td>Normison 5 mg</td>
<td>Lormetazepam 2 mg</td>
<td>Nitrazepam 5 mg</td>
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<td>OK</td>
<td>OK</td>
<td>OK</td>
<td>Osteoporosis, glaucoma</td>
<td>High Blood pressure</td>
</tr>
</tbody>
</table>

Figure 1: Scheme of treatment
Parameter | Patient 1 | Patient 2 | Patient 3 | Patient 4 | Patient 5 | Patient 6
--- | --- | --- | --- | --- | --- | ---
Total nr. of sessions | 10 | 13 | 12 | 16 | 21 | 15
-Psychophysiological | 4 | 7 | 5 | 10 | 14 | 10
-Withdrawal | 6 | 6 | 7 | 6 | 7 | 5
Interval withdrawal-Psychophysiological treatment (weeks) | 2 | 2 | 5 | - | - | -
Duration of use (months) | 5 | 14 | 30 | 36 | 48 | 7.5
Nr. of sessions before:after | - | - | - | 6:4 | 8:6 | 5.5

Table 2: Treatment parameters

Results
When evaluating treatment order, we found that in the post-treatment group it took more sessions to complete the therapy. The pre-treatment patients needed on average 5.3 sessions to complete therapy and the post-treatment patients needed on average a total of 11.3 sessions.

Also we found no apparent difference between the two treatment groups in terms of number of withdrawal sessions needed to withdraw completely. The duration of use of hypnotic medication before withdrawal was however slightly different in the two groups.

Discussion
Our results suggest that patients who withdrew from hypnotics after cognitive and behavioral treatment, attribute sleep improvement erroneously to the specific hypnotic drug used. When starting with withdrawal of their hypnotic, they experience a relapse. Based on our clinical observations we visualized a hypothetical course of treatment for the two groups in figure 2.

According to Kripke (2000) hypnotic use turns into chronicity because of the patients incorrect attributions of benefit concerning improvement of sleep duration and improved daytime functioning. In case of a combination of pharmacological and psychophysiological treatment, patients may attribute their sleep improvement primarily to their hypnotic use and not to their improved sleep/wake behaviors. Moreover, Riedel (Riedel et al. 1998) found, that non-medicated insomniacs have a quicker and better response to cognitive and behavioral therapy compared to medicated insomniacs. It could therefore be argued that
non-medicated insomnia patients never attributed their control over sleep to a factor like hypnotic medication.

**Figure 2:** Schematic course of treatment.

In summary, our clinical observations suggest that pre-treatment drug withdrawal is preferred to post-treatment withdrawal in combination with cognitive behavioral treatment for chronic insomnia. These results have to be tested and verified in a prospective study in the future.

**Literature**


