

The Influence of Sleep Deprivation on the Duration of Endogenous Depressive Episodes

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Summary. Out of 102 patients suffering from endogenous depression, it was possible to ascertain the duration of episodes in the case of 60 patients. Intraindividual comparisons among patients with unipolar depression show that sleep deprivation therapy causes a tendency to shorter depressive episodes. This tendency is related to the time of application of sleep deprivation: the sooner sleep deprivation is applied within an episode, the better the effect. Younger patients react better than older ones.

Key words: Sleep deprivation – Depression – Duration of episodes.

Introduction

One night's sleep deprivation shows an improvement of depressive states in unipolar and bipolar depressions [4]. But only in about 30% of patients does this effect persist. In most cases, several repetitions are needed, due to relapse into depression. In cases of relapse, sleep deprivation was repeated 5 to 7 days later. With some patients, the improvement after sleep deprivation persisted longer, so that the intervals were correspondingly greater. Various studies have shown that better results can be achieved by the combination of thymoleptics with sleep deprivation, compared to each method applied separately [3, 5].

If we want to judge a new antidepressive method, we have to see the relapse in the light of the total duration of depressive episodes. It is therefore important to raise the question whether sleep deprivation therapy has an influence on the duration of depressive episodes.

Patients and Methods

With 102 patients suffering from phasic depressions, we have tried to define the duration of depressive episodes on the basis of catamnestic data from out-patient and in-patient record sheets, as well as by interviewing the patients and their relatives. We considered an episode as

starting with the beginning of characteristic symptoms. The end of an episode was assumed when no more depressive symptoms could be observed for at least one month. With 60 patients, the data were so clear that they could be used in our calculations.

In order to consider uniform nosological groups, we only compared intraindividually the episodes of patients suffering from unipolar depression (according to ICD No. 296.0 and 296.2) [2] and the criteria for primary affective disorders according to Feighner et al. [1]. For all other groups, the number of patients was too small for a meaningful comparison.

Results

Figure 1 shows the duration of episodes of 47 patients suffering from unipolar depression, only under thymoleptic therapy on the one hand, and with sleep deprivation on the other hand. In most cases, a clear tendency towards shorter episodes can be observed, which is shown statistically according to the sign-test.

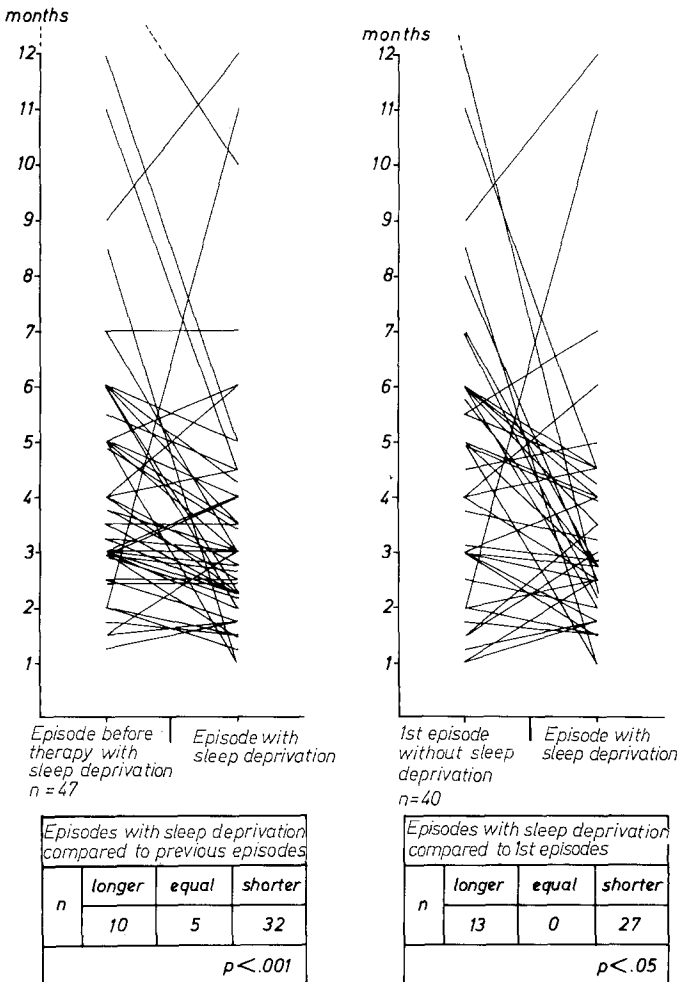


Fig. 1. Duration of episodes of unipolar depression

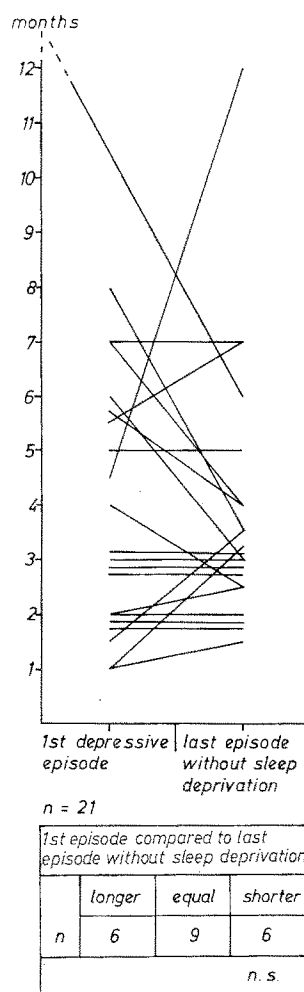
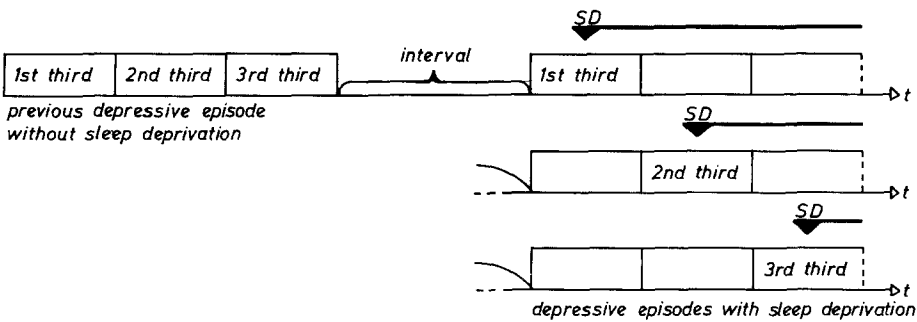


Fig. 2. First episode compared to last episode without sleep deprivation

The episodes during which only thymoleptics were given represent in some cases the first episode, but in most cases a repetition; therefore, only *first* depressive episodes treated with thymoleptics have been compared intraindividually with such episodes during which sleep deprivation was applied in addition to thymoleptic treatment. Such a comparison was possible with 40 patients. Here too, a tendency towards shorter episodes could be proved statistically.

To exclude the possibility that depressive episodes grow shorter during the course of the illness, which would call in question the tendency of the effect of sleep deprivation, we compared the first depressive episodes with the episodes before sleep deprivation intraindividually in the group of unipolar depressives (Fig. 2). There was statistically no significant difference (McNemar test for the significance of changes).

Two patients in Figure 1 have particularly long depressive episodes with sleep deprivation. One was a man of 66 who had his first depressive episode at the age



Begin of SD-therapy	Episodes <i>n</i>	Duration (months)	
		\bar{X}	S_x
1st third	22	2,01	±1,18
2nd third	17	3,60	±2,09
3rd third	24	4,90	±3,21
		$F = 8,35$	$p < .01$

Fig. 3. Duration of episodes compared to start of SD therapy within episodes

of 59, the second five years later; both episodes lasted two months. His third episode had already lasted ten months before sleep deprivation was applied.

The second patient having a longer episode accompanied by sleep deprivation was a woman of 45. Her second episode had lasted eight months before sleep deprivation was applied; her first depressive episode, four years previously, had lasted nine months in total.

In both these cases, sleep deprivation was applied very late. This was because sleep deprivation was not used earlier at our clinic.

Does the duration of an episode depend on the time when therapy with sleep deprivation is begun? Figure 3 shows the method and the results of our investigation.

Based on the previous episode, it was determined whether sleep deprivation had been applied in the first, second, or third third of the episode. If sleep deprivation was applied in the first third, the average duration was 2.01 months, in

Table 1

Age (year)	Thymoleptic therapy without SD			Thymoleptic therapy with SD			
	<i>n</i>	\bar{X}	S_x	<i>n</i>	\bar{X}	S_x	
< 50	19	4.43	± 2.23	12	2.85	± 1.79	$P < 0.05$
> 50	12	5.83	± 3.76	15	4.33	± 2.89	n.s.

n = number of patients; \bar{X} = average of episodes (months)
Duration of 1st depressive episodes

the second third, it was 3.6 months, and in the last third, it was 4.9 months. These differences are statistically significant. The earlier sleep deprivation was applied, the shorter the episodes.

If we determine the duration of first depressive episodes according to the patients' age, we can see that in the group under 50 years of age shorter episodes result if thymoleptic therapy is combined with sleep deprivation than if only thymoleptics are given. In the group of patients over 50, a tendency towards shorter episodes can be observed, but statistically it is not significant (Table 1).

Conclusion

Sleep deprivation combined with thymoleptics shows a tendency toward shorter depressive episodes, depending on the time of application and on the patient's age. The sooner sleep deprivation is applied within an episode, the better the effect. Younger patients react distinctly better than older ones.

Therefore, sleep deprivation must not be seen as a method allowing only a brief improvement of depressive symptoms, but one that tends to reduce the length of episodes.

I am grateful to Dipl.-Psych. Dr. E. Straube for his assistance with the statistical calculations.

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Received December 23, 1977