

# Application of Zopiclone in psychiatric patients suffering from sleep disturbances

JHUNU SHAMSUN NAHAR<sup>1</sup>, MASUDA KHANAM<sup>2</sup>,  
MD. AMINUL ISLAM<sup>3</sup>, M S I MULLICK<sup>4</sup>

## Summary :

A total of forty six patients suffering from various psychiatric disorders with sleep disturbances were included in this study. Their ages ranged from 17 to 60 (mean age  $32.9 \pm 10.5$ ) years. Socio-demographic data shows that non-organic insomnia is more common among females (60.9%) in our population. Sleep disturbance of the patients did not improve with conventional hypnotic drugs e.g. diazepam (30.4%), clobazam (19.6%), flurazepam (10.9%) and nitrazepam (21.7%).

Zopiclone (7.5mg nocte) for five weeks along with specific antipsychotic drugs significantly improved the sleeping time in majority (80.5%) of the patients ( $p < 0.001$ ).

## Introduction :

Insomnia is difficult to define objectively because it is not possible to measure it quantitatively. In the western world about 30 percent of the population seek medical help for insomnia<sup>1</sup>. It is of interest to psychiatrist for diagnostic purposes. Sleep onset insomnia is interpreted as a symptom of anxiety, where early morning awakening is taken as a sign of depressive disorder<sup>2</sup>.

The patients of insomnia complain of sleep which is too short to give an adequate rest. The highly subjective self definition implies that the subject suffers not only from a poor quantity and quality of sleep but also from related daytime symptoms like drowsiness, fatigue, irritability, anxiety, dysphoria and memory disturbances which hamper his family and social life as well as professional activities. That is why the main objective of an ideal hypnotic treatment should be to induce and maintain sleep, to respect sleep physiology and to improve day-time well being<sup>3</sup>.

Recently a new milestone in the treatment of insomnia has been achieved with the discovery of a new chemical class the cyclopyrrolones of which the first representative is Zopiclone.

Psychiatrists are often asked to see patients whose main problem is sleep disturbance. Many of them

are suffering from Psychiatric disorders<sup>4</sup>. In clear-cut cases where sleep disturbances have got psychological roots, treatment of the underlying disorder usually relieves insomnia. But it is often seen that initially a short term hypnotic therapy may prove very useful in cases who are suffering from severe insomnia. Of course, specific treatment for underlying disorders should be given and continued simultaneously.

The aim of this study was to find out whether zopiclone is helpful in improving sleep in psychiatric patients when sleep disturbance is a predominant complain.

## Materials and Methods :

Forty six patients suffering from various psychiatric disorders (psychotic and neurotic) who either got admitted or attended as in and out-patient in the psychiatry department of the Institute of Post-graduate Medicine and Research, Dhaka during the period from July 1995 to November 1995 were included in this study. Eighteen patients were male and twentyeight patients were female and their mean age was  $32.9 \pm 10.5$  years. Out of the 46, 38(82.6%) patients already received hypnotic drugs other than specific psychiatric therapy. Eight patients did not receive any additional hypnotic drugs for insomnia. Fourteen (30.4%) patients received diazepam, nine (19.6%) clobazam, five (10.9%) flurazepam and ten (21.7%) nitrazepam. Although the patients received the aforesaid hypnotic drugs but did not have any improvement in the duration and quality of their sleep.

All the hypnotic drugs were withdrawn and zopiclone was given in a dose of 7.5mg in tablet form at bed time for a period of 4 weeks along with the treatment for specific psychiatric disorders. The patients were interviewed twice during the course of study. A multipoint questionnaire which included socio-demographic parameters, presenting

1. Assistant Professor, Dept. of Psychiatry, I P G M & R.
2. Associate Professor, Dept. of Psychiatry I P G M & R.
3. Product Manager, Rhone-Poulence Rorer Bangladesh Ltd.
4. Assistant Professor, Dept. of Psychiatry I P G M & R.

complaints and patients' statement about sleep disturbance were collected by interviewing the patients and their relatives. Improvement of sleep was recorded only when the patients reported "increase in total sleep time, reduction in the number of awakenings and decrease in time to fall asleep"<sup>5</sup>.

The psychiatric diagnosis was made on the basis of DSM-IV diagnostic criteria<sup>6</sup>. The patients suffering from organic disorders with confusional states and those with whom rapport was difficult to establish and maintain were excluded from the present study.

The data were processed and analyzed statistically.

**Results :**

Majority of the patients were in the age group of 25 to 44 years. The male female ratio is 1:1.6. Out of the 28 female patients 21 (45.7%) were housewives. Table-I shows the socio-demographic characteristics of the patients.

Thirtyseven (80.5%) patients reported significant improvement of quality and duration of sleep ( $p < 0.001$ ).

Table-II shows the distribution of patients according to the psychiatric diagnosis and improvement of sleep after zopiclone therapy. Excepting 9 all other patients reported improved sleep.

**Table-I**

*Socio-demographic characteristics of the patients.*

Characteristics	No	%	Characteristics	No	%
<b>Sex</b>			<b>Occupation</b>		
Male	18	39.1	Student	5	10.9
Female	28	60.9	Service Holder	11	23.9
			H. Wife	21	45.7
<b>Education</b>			Businessman	4	8.7
Illiterate	5	10.9	Unemployed	2	4.3
Literate	41	49.1	Self-employed	3	6.5
<b>Social background</b>			Married	34	73.9
Urban	36	78.3	Unmarried	9	19.6
Rural	10	21.7	Divorced	2	4.4
			Separated	1	2.1

**Table-II**

*Sleep response with zopiclone in psychiatric patients*

Disease	No.	Before therapy	After therapy	Response %
Conversion disorder	3	3	3	100
Depressive disorder	18	18	15	83.3
Somatization disorder	7	7	6	85.7
Anxiety disorder	6	6	5	83.3
Manic disorder	1	1	0	0
Schizophrenia	1	1	0	0
Drug abuse	5	5	5	100
Pain disorder	3	3	2	66.7
Phobic disorder	2	2	1	50
<b>Total</b>	<b>46</b>	<b>46</b>	<b>37</b>	<b>81.4</b>

## Discussion :

Sleep disturbances are common complaints of patients with mental disorders. An additional diagnosis of insomnia related to mental disorder is made only when sleep disturbance is a predominant complaint and is sufficiently severe to warrant independent clinical attention. The sleep disturbance may be one of the earliest symptoms in an individual who subsequently develop psychiatric disorder<sup>4</sup>.

Majority of the psychiatric drugs take at least a period of two weeks to act on the specific diseases. At times patient's sleep disturbance is so severe that it needs immediate treatment.

In this study nearly one half of the patients were literate, housewives and urban dwellers. Socio-economic stress may be a contributing factor for non-organic insomnia. On the other hand the female preponderance may be due to their awareness and availability of hospital facility. Underlying psychiatric disorders like depression, anxiety, somatoform and pain disorders are also the cause. Western surveys also suggest that non-organic insomnia is more common among women<sup>1,6</sup>. They emphasized on psychiatric disorders like depression and anxiety as the main causes of functional insomnia.

In this study majority of the patients reported significant sleep improvement after receiving zopiclone. This finding is consistent with the findings of other authors<sup>3,7</sup>. In our study zopiclone induced a hypnotic effect with increase in total sleep time, reduction in the number of awakenings and decrease in time to fall asleep. This finding is also well consistent with the report of other studies<sup>3,5,7</sup>. Musch and Maillaird compared the hypnotic effect of zopiclone and benzodiazepines and observed better hypnotic effect of the former drug<sup>7</sup>.

Though it is said that zopiclone does not affect on vigilance, psychomotor co-ordination, cognition and memory after night administration but it is seen in our study that in a few cases patients complained of hangover with day-time consequences<sup>3,5,7</sup>.

We conclude that zopiclone has better hypnotic effect than other conventional drugs for the treatment of insomnia in mentally disordered patients.

## References :

1. Kaplan H1, Sadock Bj. Synopsis of psychiatry. 6th edition, Maryland, USA, Williams and Wilkins, 1991; p 471.
2. Hill P, Murray R, Thorly A. Essentials of postgraduate psychiatry, 2nd edition, London, Grune and Straton Inc. 1986; pp 220-382.
3. G. Beaumont and R. L Holland; A Multi-centre open study in general practice to evaluate the efficacy and acceptability of zopiclone 7.5 mg nocte in patients requiring the prescription of an hypnotic. International Clinical Psychopharmacology; 1990; 5 suppl-2 : 11-20
4. Gelder M. Gath D, Mayou R, Oxford text book of psychiatry, 2nd edition, Oxford University Press, 1989; p 399.
5. O, Kawno, H. Watanabe; K Fuclino et al; Effects of Zopiclone and nitrazepam on sleep E E G in healthy volunteers; symposium on zopiclone; Tokyo 1981; PP- 119-128.
6. Diagnostic and statistical Manual of Mental Disorders, 4th edition, American Psychiatric Association, Washington D. C. 1994;
7. B Musch and F. Maillaird; Zopiclone the third generation hypnotic: a clinical overview; International Clinical Psychopharmacology; 1990; 5 suppl -2 : 146-158.