



# Indian Journal of Psychiatry

OFFICIAL PUBLICATION OF THE INDIAN PSYCHIATRIC SOCIETY

Volume 50, No. 1, January-March 2008

## CONTENTS

### EDITOR SPEAKS

Golf, dreams and deadlines: *T. S. Sathyanarayana Rao* 1

### EDITORIAL

Wake up call from 'Stars on the Ground': *T. S. Sathyanarayana Rao, V. S. T. Krishna* 2

### PERISCOPE: ASSISTANT EDITOR'S COLUMN

Cough up for just a cup of coffee: *G. Swaminath* 5

### GUEST EDITORIAL

Are we over-dependent on pharmacotherapy?: *Roy Abraham Kallivayalil* 7

### REVIEW ARTICLE

The conscious access hypothesis: Explaining the consciousness: *Ravi Prakash* 10

### ORIGINAL ARTICLES

Evaluation of antioxidant deficit in schizophrenia: *Gora Dadheech, Sandhya Mishra, Shiv Gautam, Praveen Sharma* 16

Prevalence and pattern of mental disability using Indian disability evaluation assessment scale (IDEAS) in a rural community of Karnataka: *S. Ganesh Kumar, Acharya Das, P. V. Bhandary, Shashi Joyce Soans, H. N. Harsha Kumar, M. S. Kotian* 21

A cross-sectional comparison of disability and quality of life in euthymic patients with bipolar affective or recurrent depressive disorder with and without comorbid chronic medical illness: *Hema Tharoor, Ashutosh Chauhan, Podila Satya Venkata Narasimha Sharma* 24

Suicidal behavior amongst adolescent students in south Delhi: *Rahul Sharma, Vijay L. Grover, Sanjay Chaturvedi* 30

Psychological autopsy of 101 suicide cases from northwest region of India: *B. S. Chavan, Gurvinder Pal Singh, Jaspreet Kaur, Reshma Kochar* 34

Experiences of stigma and discrimination endured by people suffering from schizophrenia: *Santosh Loganathan, Srinivasa Murthy. R* 39

### BRIEF COMMUNICATIONS

Serotonin transporter gene polymorphism and treatment response to serotonin reuptake inhibitor (escitalopram) in depression: An open pilot study: *Mushtaq A. Margoob, Dhuha Mushtaq, Imtiyaz Murtza, Huda Mushtaq, Arif Ali* 47

Antidepressant-like activity of tramadol in mice: *Bhupinder Singh Kalra, Vandana Tayal, Shalini Chawla* 51

### CASE REPORTS

Hyperprolactinaemia with amisulpride: *Rajnish Raj, Balwant Singh Sidhu* 54

Levofloxacin-induced acute psychosis: *Nagaraja Moorthy, N. Raghavendra, P. N. Venkatarathnamma* 57

Primary insomnia treated with Zolpidem in an 18-month-old child: *Tushar Bhat, Sheryl John Pallikaleth, Nilesh Shah* 59

### CME

Deficit schizophrenia: Concept and validity: *Sandeep Grover, Parmanand Kulhara* 61

**HISTORY AND PSYCHIATRY**

Private psychiatric care in the past: With special reference to Chennai: *O. Somasundaram* 67

**LITERARY PSYCHIATRY**

As I lie sleepless this night.....: *T. M. Raghuram* 70

A Pining: *Fr. Kurien George* 70

**LETTERS TO EDITOR**

Reflex neurosis (NEAD): *V. A. P. Ghorpade* 71

Carisoprodol-induced amnesic state: *Arun Gupta, K. Sreejayan, Prabhat Chand, Vivek Benegal, Pratima Murthy* 72

Non-compliance of prescriptions by the patients: *C. Shamasundar* 73

**BOOK REVIEW**

Tobacco use: Health and behavior: *M. S. Bhatia* 75

The copies of the journal to members of the association are sent by ordinary post. The editorial board, association or publisher will not be responsible for non-receipt of copies. If any of the members wish to receive the copies by registered post or courier, kindly contact the journal's / publisher's office. If a copy returns due to incomplete, incorrect or changed address of a member on two consecutive occasions, the names of such members will be deleted from the mailing list of the journal. Providing complete, correct and up-to-date address is the responsibility of the members. Copies are sent to subscribers and members directly from the publisher's address; it is illegal to acquire copies from any other source. If a copy is received for personal use as a member of the association/society, one cannot resale or give-away the copy for commercial or library use.

# Carisoprodol-induced amnestic state

Sir,

A 35-year-old man was admitted with a complaint of abuse of carisoprodol. The patient had history of opioid dependence but currently abstinence since last 2 years. After stopping opioid use, he started using carisoprodol tablets, initially 700 mg/day, increasing over a period of 2 years to 1,050 mg/day. When he presented to our center, he satisfied the criteria for dependence (ICD 10),<sup>[1]</sup> with prominent tolerance, craving, and salience. Following carisoprodol use, he described 10-15 episodes, during which he had walked for 3-4 km without any memory of events that had occurred on the way, and he could not remember the events when other people narrated those to him. However, he would not lose way and would reach home every time during these episodes. He would not identify people whom he had known before, when he met them on the way during these periods. Each of these episodes would last from 45 min to 1 h. The patient had experienced his last episode 1 week before he presented to us.

He did not report recent use of alcohol or other drugs, symptoms of aura or postictal state, recent head injury, or any other illness. The last intake of tablets was 2 days prior to admission. He did not manifest significant withdrawal symptoms except for mild body ache. Physical examination showed vital signs within normal limits. He was alert, oriented; and he scored 30 out of 30 on the mini mental state examination (MMSE).<sup>[2]</sup> Electrolytes, liver function tests, complete blood counts were within normal limits. Urine screening for cannabis, opioids, benzodiazepines, amphetamines, and cocaine were negative. His EEG (electroencephalogram) was normal.

Carisoprodol, a synthetic congener of meprobamate, is a centrally acting muscle relaxant indicated in acute painful

musculoskeletal conditions.<sup>[3]</sup> An extensive literature search did not reveal any prior reports of amnestic states with carisoprodol alone. There is a report of amnestic periods in a person using a combination of carisoprodol and treatment with multiple psychotropic drugs.<sup>[4]</sup> In this report, the authors reported a case of opioid dependence, seizure disorder with major depressive disorder being prescribed carisoprodol for back and neck pain. He later developed tolerance and withdrawal symptoms for carisoprodol. He was found to have amnestic episodes, which were attributed to use of multiple psychoactive medications (sertraline, zolpidem, quetiapine, gabapentin), apart from carisoprodol.<sup>[4]</sup> Recently, carisoprodol use among drivers in Norway was found to result in significant impairment and risk for accidents, irrespective of blood meprobamate concentration.<sup>[5]</sup> In the index case, our patient was not using any other drugs or medications during the period of carisoprodol use. Hence this symptom is likely to be related to carisoprodol.

There have been previous reports of carisoprodol dependence.<sup>[4,6,7]</sup> Most patients reported using carisoprodol along with opioids to decrease the withdrawal symptoms of opioids and to avoid subsequently becoming dependent on it. However, this patient had started using carisoprodol after stopping opioids. In a recent report, specific withdrawal symptoms like anxiety, tremulousness, insomnia, jitteriness, muscle twitching, and hallucinations were described. These symptoms are most likely caused by withdrawal from the meprobamate that accumulates after large amounts of carisoprodol are ingested.<sup>[8]</sup>

Carisoprodol acts by releasing its metabolite meprobamate.<sup>[3]</sup> There are reports which attest to the dependence-causing potential of meprobamate. Though there is a report of memory deficits as assessed on neuropsychological tests

## Letter to Editor

in a 53-year-old man on diazepam and meprobamate,<sup>[5]</sup> a literature search did not reveal amnestic episodes with meprobamate. The exact mechanism of carisoprodol in the central nervous system is not known; it is assumed that it acts through GABA<sub>A</sub> receptor. There is a case report where benzodiazepine antagonist flumazenil was used to reverse a case of carisoprodol intoxication.<sup>[10]</sup> This supports that carisoprodol may be a GABA<sub>A</sub> receptor indirect agonist with central nervous system chloride ion channel conductance effects similar to the benzodiazepines.

**Organization:** National Institute of Mental Health and Neurosciences; **Place:** Bangalore; **Date:** 02-08-2007

**Arun Gupta, K. Sreejayan, Prabhat Chand,  
Vivek Benegal, Pratima Murthy**

Department of Psychiatry, National Institute of Mental Health and Neurosciences, Bangalore, Karnataka, India  
E-mail: chand@nimhans.kar.nic.in

## REFERENCES

1. World Health Organization. International Classification of Diseases - 10<sup>th</sup> revision. 1994.
2. Folstein M, Folstein S, McHugh P. Mini-mental state: A Practical method for grading the cognitive state of patients for the clinician. *J Psychol Res* 1975;12:189-98.
3. Charney DS, Mihic SJ, Harris RA. Hypnotics and sedatives. *In:* Hardman JG, Limbird LE, Gilman AG, editor. Goodman and Gilman's the pharmacological basis of therapeutics. 10<sup>th</sup> ed. 2001. p. 399-427.
4. Heacock C, Bauer MS. Tolerance and dependence risk with use of carisoprodol. *Am Fam Physician* 2004;69:1622-3.
5. Bramness JG, Skurtveit S, Mørland J, Engeland A. The risk of traffic accidents after prescriptions of carisoprodol. *Accid Anal Prev* 2007;39:1050-5.
6. Morse RM, Chua L. Carisoprodol dependence: A case report. *Am J Drug Alcohol Abuse* 1978;5:527-30.
7. Sikdar S, Basu D, Malhotra AK, Varma VK, Mattoo SK. Carisoprodol abuse: A report from India. *Acta Psychiatr Scand* 1993;88:302-3.
8. Reeves RR, Hammer JS, Pendarvis RO. Is the frequency of carisoprodol withdrawal syndrome increasing? *Pharmacotherapy* 2007;27:1462-6.
9. Brooker AE, Wiens AN, Wiens DA. Impaired brain functions due to diazepam and meprobamate abuse in a 53-year-old-male. *J Nerv Ment Dis* 1984;172:498-501.
10. Roberge RJ, Lin E, Krenzelo EP. Flumazenil reversal of carisoprodol (Soma) intoxication. *J Emerg Med* 2000;18:61-4.