

comparable to patients with psychiatric disorders and insomnia in terms of days of work lost and use of health care resources.

## P0202

Protective effect of Zolpidem against sleep deprivation-induced certain behavioral alterations and oxidative damage: Possible gabaergic mechanism

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Problem of sleep deprivation or inadequate sleep is seen more frequently now-days. Sleep loss or inadequate quality sleep is considered as health risk factor that contributes to the genesis of several disease processes. Sleep deprivation has recently been proposed to cause oxidative damage. In the present study, we investigated the possible involvement of GABAergic modulation in the protective effect of zolpidem against sleep deprivation-induced behavior alterations and oxidative damage in mice. 72-hr sleep deprivation caused anxiety like behavior, weight loss, impaired ambulatory activity and oxidative damage as indicated by increased lipid peroxidation, nitrite level and depletion of reduced glutathione and catalase activity as compared to naïve animals (placed on saw dust). Treatment with Zolpidem (5 mg/kg and 10 mg/kg, ip) significantly improved ambulatory activity, weight loss and antianxiety effect as compared to control (sleep deprived)  $P < 0.05$ . Biochemically, Zolpidem treatment significantly restored depleted reduced glutathione, catalase activity, attenuated lipid peroxidation and nitrite level as compared to control (72-hr sleep-deprived) ( $P < 0.05$ ). A combination flumazenil (0.5 mg/kg) and picrotoxin (0.5 mg/kg) with lower dose of zolpidem (5 mg/kg) significantly antagonized the protective effect of zolpidem ( $P < 0.05$ ). However, combination of muscimol (0.05 mg/kg) with zolpidem (5 mg/kg, ip) potentiated protective effect of zolpidem which was significant as compared to their effect per se ( $P < 0.05$ ). Present study suggests that zolpidem might produce its protective effect by involving GABAergic system against sleep deprivation-induced behavior alterations and related oxidative damage.

## P0203

Comorbidity between ADHD and sleep disorders in school children

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**Objectives:** Parents consulting the Psychology Department of the General Children's Hospital of Penteli about their children's concentrating difficulties often complain that they also present sleep problems, such as nightmares, somnambulism, difficulties to fall asleep etc. The aim of the present study is to examine the co-morbidity between ADHD and sleep disorders, as long as previous studies at our Department

**Methods:** The sample consisted of 173 children, who consulted the Department about the above problems, aged 6 to 14 (68.2% boys, 31.8% girls). Children were categorized into two groups: a) children diagnosed with ADHD b) children not diagnosed with ADHD. Parents were invited to completed the ADHD-IV scale, as well as the Aschenbach CBCL test. Children were submitted to BECK's Youth Inventory. In order to compare the two groups we used the t test.

**Results:** Considering parents and children's reports, it was found that co-morbidity between ADHD and sleeping difficulties does exist to a significant level. More precisely, children with hyperactivity, compulsiveness and concentrating difficulties also seemed to experience low quality of sleep. Co-morbidity between ADHD and sleep

disorders was not found to be affected by sex, whereas age seemed to be an important factor.

**Conclusions:** A considerable percentage of children with ADHD was also found to present significant sleep disorders. It is also important to note that children presenting not the whole syndrome but some symptoms of ADHD, also tend to have sleep difficulties.

## P0204

Evaluation of the HAM-D17 following eszopiclone treatment in patients with insomnia co-morbid with major depressive disorder or generalized anxiety disorder

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**Introduction:** Major Depressive Disorder (MDD) and generalized anxiety disorder (GAD) can coexist and patients may have insomnia marked by difficulty falling and/or staying asleep and potentially reduced quality of life (QoL). Eszopiclone has been shown to improve sleep in patients with insomnia comorbid with MDD or GAD. This analysis examined the effects of eszopiclone co-therapy on the HAM-D17 in these two patient populations.

**Methods:** Patients with insomnia comorbid with MDD and baseline HAM-D17 > 14 (excluding insomnia items; n=545) received morning fluoxetine and were randomized to nightly eszopiclone 3mg or placebo for 8 weeks. Patients with insomnia comorbid with GAD and screening MADRS ≤ 20 (n=593) received daily escitalopram oxalate and were randomized to nightly eszopiclone 3mg or placebo for 8 weeks. Clinician-administered HAM-D17 was evaluated at baseline and Weeks 4 and 8 in both studies.

**Results:** Baseline HAM-D17 median scores were 22 and 15 in the MDD and GAD populations, respectively. Change from baseline HAM-D17 scores were significantly improved ( $p < 0.02$ ) with eszopiclone co-therapy at Weeks 4 ( $-10.0 \pm 7.6$ ) and 8 ( $-13.6 \pm 7.7$ ) relative to fluoxetine monotherapy ( $-8.4 \pm 6.8$  and  $-11.5 \pm 7.1$ ) in the MDD population. Similarly, change from baseline HAM-D17 scores in the GAD population were significantly improved ( $p < 0.002$ ) with eszopiclone co-therapy at Weeks 4 and 8 ( $-5.8 \pm 4.9$  and  $-6.7 \pm 5.4$ ) relative to escitalopram monotherapy ( $-4.3 \pm 5.1$  and  $-5.4 \pm 5.6$ ).

**Conclusion:** Treatment of insomnia with eszopiclone was associated with significant improvements in HAM-D17 scores relative to fluoxetine or escitalopram monotherapy in patients with insomnia comorbid with MDD or GAD, even after removal of insomnia items from the scale.

## P0205

The sleep habits in children with cerebral palsy

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**Purpose:** Cerebral palsy (CP), a long-term disease, may change parents' attitude towards ill child and may cause certain differences in everyday functioning between children with CP and healthy persons