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Sponsor / Company : Sanofi		Study Identifier : NCT01097382	
Drug Substance : ZOLPIDEM		Study Code : ZOLPI_L_04551	
Title of the study:		"National, multicenter, open label, Phase IV, before-after design study, in adult patients with primary insomnia to evaluate sleep satisfaction and psychomotor performance after 1 month of treatment with Zolpidem CR (Ambien®CR) in 6 sites in Argentina"	
Study center(s):		6 centers, Argentina	
Study period:		Phase of development:	
<u>Date first subject enrolled:</u> 05 MAR 2010		IV	
<u>Date last subject completed:</u> 29 APR 2011			
Objectives:		<p><u>Primary:</u> To evaluate sleep satisfaction before and after Zolpidem CR (Ambien®CR) administration through LSEQ (Leeds Sleep Evaluation Questionnaire) questionnaire score.</p> <p><u>Secondary:</u> To evaluate psychomotor performance through DSST (Digit Symbol Substitution Test) and ESS (Epworth Sleepiness Scale) instruments.</p>	
Methodology:		In a given site, all patients complying with entry criteria were offered to enter the trial during the recruitment period. After informed consent is given (and pregnancy is excluded in women of reproductive capability) patients had to complete LSEQ (Leeds Sleep Evaluation Questionnaire), DSST (Digit Symbol Substitution Test) and ESS (Epworth Sleepiness Scale) instruments. After receiving instructions about sleep hygiene the following treatment was prescribed: Zolpidem CR (AMBIEN CR®) 12,5 mg once a day, per os just before bedtime (in patients ≥ 65 years old or with liver failure 6,25 mg/day) during 4 weeks. After 26 (±2) days patients were evaluated again through LSEQ, DSST and ESS.	
Number of patients:		<u>Planned:</u> 30	<u>Included:</u> 30
			<u>Treated:</u> 29
Evaluated:		<u>Efficacy:</u> 28	<u>Safety:</u> 29

<p>Diagnosis and criteria for inclusion:</p>	<p><u>Inclusion criteria:</u></p> <ul style="list-style-type: none"> • Men or women > 21 years old attending the consultation of the selected investigators, for any cause • Criteria for primary insomnia according to DSM IV (Diagnostic and Statistical Manual – Revision 4) positive in Visit 1 • Informed consent acceptance <p><u>Exclusion criteria:</u></p> <ul style="list-style-type: none"> • Pregnant or lactating women • Serious neuropsychiatric ongoing disorder DSM IV (Diagnostic and Statistical Manual – Revision 4) • History of Substance (including alcohol) abuse or dependence in the last year • DSM IV (Diagnostic and Statistical Manual – Revision 4) • Hypersensitivity to Zolpidem (Ambien®CR) or its excipients • Severe hepatic failure • Acute or severe respiratory failure • Myasthenia gravis • Use of sleep medication, OTC (Over The Counter) or prescribed, within 2 weeks or 5 half lives of the medication before V1 • Any serious medical or surgical condition affecting the treatment metabolism or the safety of the patient
<p>Investigational product:</p> <p>Dose:</p> <p>Administration:</p>	<p>Zolpidem CR (Ambien®CR)</p> <p>12,5 mg/day In patients ≥ 65 years old or with hepatic failure: 6,25 mg/day Per Os</p>
<p>Duration of treatment: 4 weeks</p>	<p>Duration of observation: 4 weeks</p>
<p>Criteria for evaluation:</p>	
<p><u>Efficacy:</u></p>	<p><u>Primary endpoint:</u> Leeds Sleep Evaluation Questionnaire score</p> <p><u>Secondary:</u> Digit Symbol Substitution Test and Epworth Sleepiness Scale scores</p>
<p><u>Safety:</u></p>	<p>Adverse events monitoring</p>
<p>Statistical methods:</p>	<p>For the calculation of the sample size for the before-after design study (paired data) assuming an average difference between both measurements of 5 (for a null hypothesis of a difference of 0) with a standard deviation of 8, alpha of 0.05 and power of 90%. For the calculation Stata 8.0 was used.</p> <p>For the analysis categorical variables were analyzed through simple frequencies and proportions. For quantitative variables central trend measurements (mean and median) were used, as well as dispersion measures: interquartile rank and standard deviation. For the analysis of groups with paired data the non-parametric Wilcoxon signed-rank test was used.</p> <p>In all cases, a level of significance (p) of 0.05 was established.</p>

Summary:

We pretended to carry out a study to evaluate the impact of a 4 weeks treatment with Zolpidem CR (Ambien®CR) in qualitative features of the sleep.
 Protocol dated Oct 30th, 2009
 Amendment 1: April 28th, 2010
 Amendment 2: Dec 15th, 2010

Basal characteristics of the population:

Age

Mean (SD): 43.7 (11.07)

Median (IR): 45 (36-54)

Sex:

Female: 17 (56.67%)

Patient disposition:

Of the 30 patients only one was lost to follow-up (the patient did not showed up to the site for visit 2) and one did not complete the treatment because of a non serious adverse event (day 10 of treatment)

Exposure to treatment:

Administered dose: Only one patient received the 6.25 mg/d dose. The remaining population received 12.5 mg/d

Duration of treatment:

Mean: 25.31 (SD: 3.23)

Median: 26 (IR: 25-27)

Min: 23 days

Max: 28 days

Efficacy:

Primary endpoint: sleep evaluation through LSEQ

	Before	After	p value
Mean (SD)	-21,4 (12,3)	23,9 (14,8)	
Median (IR)	-23,6 (28,6/-19)	22,45 (11-31)	0,000

All analyzed patients showed an improvement in LSEQ questionnaire score in V2 compared to the first measurement (V1)

Secondary endpoints: somnolence: ESS questionnaire

	Before	After	p value
Mean (SD)	7.5 (4.2)	3.6 (3.2)	
Median (IR)	8.5 (5-10)	3 (2-5)	0.000

<p>Efficacy results:</p>	<p>Of the 28 assessed patients, 26 showed an improvement in the Epworth Sleepiness Scale after the treatment. One patient did not show any changes and one showed deterioration.</p> <p>Psychomotor performance: Digit Symbol Substitution Test instrument</p> <table border="1" data-bbox="699 432 1444 528"> <thead> <tr> <th></th> <th>Before</th> <th>After</th> <th>p value</th> </tr> </thead> <tbody> <tr> <td>Mean (SD)</td> <td>31.25 (6.3)</td> <td>37 (8.9)</td> <td rowspan="2">0.0001</td> </tr> <tr> <td>Median (IR)</td> <td>30.5 (28-35)</td> <td>38 (33-41)</td> </tr> </tbody> </table> <p>Of the 28 assessed patients 25 showed an improvement in the DSST instrument after the treatment and 3 patients showed deterioration.</p>		Before	After	p value	Mean (SD)	31.25 (6.3)	37 (8.9)	0.0001	Median (IR)	30.5 (28-35)	38 (33-41)
	Before	After	p value									
Mean (SD)	31.25 (6.3)	37 (8.9)	0.0001									
Median (IR)	30.5 (28-35)	38 (33-41)										
<p>Safety results:</p>	<p>Non serious adverse events were reported.</p>											
<p>Issue Date:</p>	<p>04 June 2012</p>											