Pilot Open Non-Comparative Study to Evaluate a New Nutraceutical Associated With Sleep Hygiene Guidelines in Subjects With Persistent Complaint of Unsatisfactory Sleep (Difficulty in Initiating Sleep for at Least 1 Month and Reduced Sleep Quality) – Sonic Study

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SONIC Study

1 – Abstract

Background. Pre-sleep arousal is one of the most common sleep disorders. This term refers to both physiologic processes (such as a rapidly beating heart) and mental processes (such as being unable to stop thinking).

The management of this condition relies on both pharmacological and non-pharmacological approaches. The last years evidenced a decrease in using sedative and hypnotic drugs to treat this kind of diseases, reserving their use for a few selected cases in which the symptoms or psychiatric components are significant. On the other hand, the subjects and the medical community are considering the positive results obtained with non-pharmacological approaches in the management of mild and recent sleep disorders.

Study Objectives. The aim of this study was to have a preliminary evaluation of the efficacy of nutraceutical Sonidor® ® (hawthorn, lavender, hop extracts) in subjects affected by persistent mild sleep disorders (difficulty in initiating sleep for at least 1 month and reduced quality of sleeping) to whom in special care setting have been suggested sleep hygiene guidelines and administered the tested nutraceutical for one month.

Methods. The trial was designed as an interventional, pilot, open label, multicentric, non-comparative trial enrolling 40 subjects, both men and women, aged 18 to 70 years, with persistent complaint of unsatisfactory sleep related to pre-sleep hyperarousal (difficulty in initiating sleep for at least 1 month). The nutraceutical was administered to the subjects (l tablet per day) for 30 days; at the 7-day phone call the Investigator could increase the dosage to 2 tablets per day only in non-responding subjects. Evaluations were performed at 7-, 15- and 30-days of Sonidor® use. The efficacy outcomes were: Pre-Sleep Arousal Scale (PSAS), Insomnia Severity Index (ISI), Subject QoL (PHQ-9), and Restorative Sleep Questionnaire-Daily (RSQ-D). Clinical safety was monitored throughout the study.

Results. The increase of Sonidor® dosage was chosen in 31,5% of subjects, after the 7-day phone call**.** The values of PSAS (primary outcome) changed significantly after 15 days of Sonidor® use (p= 0.029) and were reduced further after 30 days (11.9% reduction from baseline values, p< 0.0001). For ISI, somatic and cognitive subscale of PSAS, PHQ-9 and RSQ-D (secondary outcomes), a significant difference between baseline and 30 day-visit values was found. Safety was optimal (only 4 mild adverse events and not correlated with the tested nutraceutical).

Conclusions. The data of this pilot study evidenced that Sonidor® associated with sleep hygiene guidelines achieved a significant improvement in sleep-related outcomes and QoL of subjects with pre-sleep hyperarousal. The clinical relevance of the observed changes was small but promising, considering the modest sample size typical of a pilot study.

Funding. The manufacturer of the tested nutraceutical, Italfarmaco SpA (Italy) covered the costs of the clinical investigation.

Keywords. Sleep disorders, Pre-Sleep Arousal, Quality of Life, sleep hygiene, nutraceutical, hawthorn, lavender, hop.

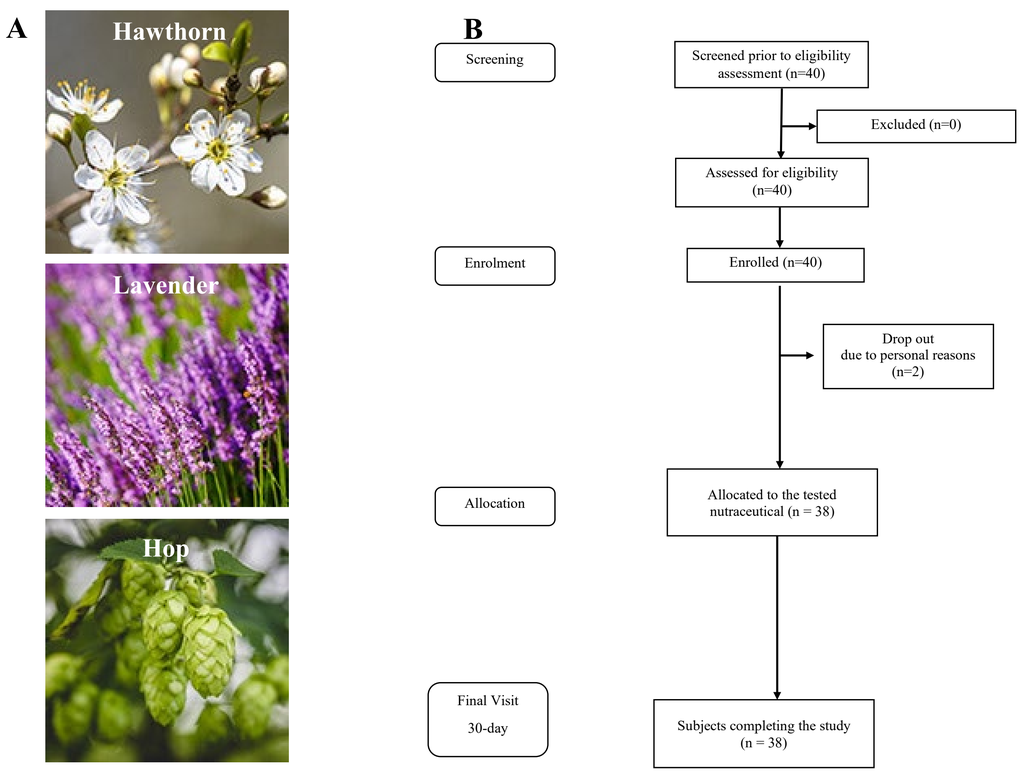

Figure 1: A, principal components of Sonidor. **B**, flow diagram of the study.

2 - Sonidor® improved ISI scores after 30 days

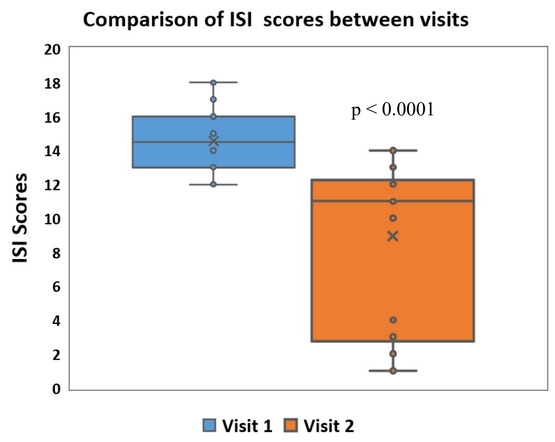

Figure 2: Insomnia Severity Index was significantly reduced from baseline after 30 days of Sonidor use.

Conflict of interest disclosure information

BDF, GS and DDE work at Opera CRO, the CRO in charge of managing the study.

TC, HD, RS and FSL declare no conflict of interest.

PR works at Italfarmaco S.p.A., the sponsor of the study.

3 – Sonidor® improved significantly cognitive and somatic PSAS scores after 30 days

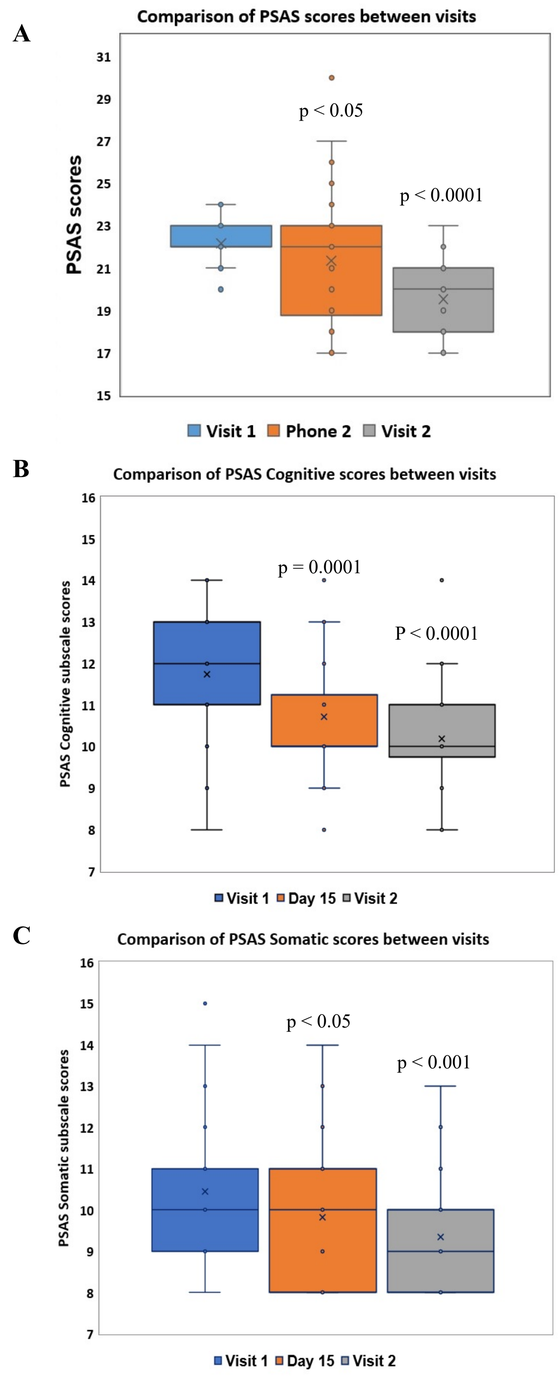

Figure 3: A, total Pre-Sleep Arousal Scale (PSAS) scores after 30 days of administration of Sonidor®. **B**, cognitive sub-scale of PSAS. **C**, somatic sub-scale of PSAS.

4 – Sonidor® ameliorated quality of life vs baseline

	Baseline Visit 1	Day 30 Visit 2	p-value
Mean (SD)	8.11(3.34)	4.92(2.27)	
Median	7.50	5.00	V1 vs V2
Minimum	4.00	1.00	p < 0.0001
Maximum	18.00	11.00	

Table 1: Quality of life of subjects measured with the Patient Health Questionnaire-9 is improved after 30 days of use of Sonidor®.

5 – Conclusions

1) **Sonidor®, an innovative food supplement composed of hawthorn, lavender and hop, was well tolerated in all the subjects in the study.**
2) **Insomnia Severity Index (ISI) was reduced from baseline after 30 days of administration of Sonidor®.**
3) **Total, cognitive and somatic PSAS parameters improved significantly.**
4) **Quality of Life (PHQ-9) of subjects also improved after 30 days.**

Sonidor® proved to be a good non-pharmaceutical option for subjects with mild sleep complaints.