

the effect of agomelatine 25 mg on sleep architecture using CAP analysis in outpatients suffering from MMD.

Methods: 15 out-patients with a major depression episode (DSM-IV), aged between 20 and 56 years, with a baseline HAM-D score ≥ 20 received agomelatine 25 mg p.o. a day for 42 days. Polysomnography was performed at D-1 (adaptation night), D0, D7, D14, D41 (adaptation night) and D42.

Wake and sleep staging were analysed by the Rechtschaffen and Kales international criteria. A CAP analysis was performed with investigator blind to patient's condition following the international atlas recommendations.

Results: The CAP parameters indicated very important changes that were even more marked than those noted with conventional sleep scoring. The CAP rate, CAP time and CAP cycle were decreased comparing baseline night to treatment nights 7 and 42, respectively: CAP rate went from 61.5(5.9) to 32.9(11.1) and 30.1(10.7)%; CAP time changed from 205.7(45.9) to 84(26.7) and 84.8(40.8) minutes; finally the number of CAP cycle went from 444.9(82.1) to 173.0(58.1) and 177.0(87.4). All baseline results were significantly different from treatment nights, but no difference was seen between the 2 treatment nights (ANOVA ($p=0.0001$), with post hoc analysis with tukey test ($p=0.05$) baseline versus night 7 and night 42). A phase A subtype analysis was also performed:

(%)	Baseline	Night 7	Night 42	p-value (ANOVA) post-hoc	
A1 subtype	47(9)	60(16)	65(14)	0.0002	B < N7, N42
A2 subtype	33(6)	23(13)	21(13)	<0.0125	B > N7, N42
A3 subtype	19(7)	13(9)	13(6)	<0.0123	B > N7, N42

As can be seen, there was a significant decrease in phase A2 and A3 ($p=0.05$ Tukey test post ANOVA) and a significant increase in phase A1 ($p=0.05$ post hoc Tukey test) with medication.

Conclusions: Our results showed that agomelatine brought a significant and very early improvement (night 7) in sleep quality. CAP came out to be a very useful tool in evaluating the impact of antidepressant treatment on sleep in patients with MDD.

O 087

A new data acquisition system for monitoring circadian variations of activity and ECG: Clinical application

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Aims: Variations of circadian activity profiles and sleep patterns have proved to be altered in various psychiatric disorders as did heart rate and related parameters. For example, during a depressive episode many patients show changes in sleep, motor activity, and ECG which may be important for diagnosis as well as for treatment. Today, the evaluation of these parameters is not part of the standard diagnostic and therapeutic monitoring procedure. But they can yield valuable information, e.g. for the medication adjustment during the acute phase by assessing sleep disturbances and motor activity quantitatively and objectively.

Methods: In order to show the applicability of our new data acquisition system in a clinical setting, we evaluated the course of a depressive episode in an in-patient from the beginning until the end of treatment in hospital. On the one hand, standard psychometric scales were used for diagnostic assessment. On the other hand, important physiological parameters like ECG (HR, HRV: LF, HF, SDNNindex) and motor activity (activity index and variations) were monitored continuously by means of the new data acquisition system. It consists of a textile and an electronic module and can be attached to the waistband of standard underpants. There are 3 electrodes for 1-lead ECG recordings integrated into the textile. On the electronic module, a 2D-accelerometer is incorporated.

Results: Over a 12-week period the 46 year-old female patient with a recurrent episode of major depression (SKID) demonstrated a gradual improvement of depressive symptoms as measured by weekly ratings (HAM-D, BDI, CGI). Quality of sleep was assessed daily by a sleep protocol. The data acquisition system revealed a gradual increase in overall daytime motor activity during the 12-week evaluation period. Furthermore, time parameters of heart rate variability proved to be enhanced and will be presented.

Conclusion: This first pilot study demonstrates alterations of physiological parameters relevant for depression over a continuous and complete monitoring period of 12 weeks. These alterations have proved to be consistent to the course of the standard psychometric parameters. Therefore, our additional monitoring results provide a psychobiological profile of the clinical course of psychiatric disorders like depression which can be used for optimization of therapy.

Sleep in other medical disorders

O 088

Sleep Disturbances are Common in Hemodialysis Patients and are Associated with a Poor Quality of Life: A Case Controlled Study

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