

in major trauma patients. The German, United Kingdom trauma registries scores are based on the largest population, with demographics updated to the nowadays European injury pattern.

Conclusions. Even if they are imperfect, trauma scores are essential tools in trauma patients' management and research. Using large national databases allow better research, validation and development of scoring systems, and there is a need of the creation of an international database and further research to create a score perfect for each population.

Key words: trauma, score, GCS, ISS, TRISS

279. PARAMETERS OF THE RESPIRATORY PATTERN IN PATIENTS WITH BORDERLINE TYPE PERSONALITY DISORDER

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Introduction. The study of the changes of the respiratory pattern under the influence of physiological or pathological factors allows the thoroughgoing of the knowledge in the field of physiology of systemic interactions, as well as in the field of the physiopathology of functional psychosomatic diseases. It should be taken into consideration the high prevalence of borderline type personality disorder in primary health care and up to 20% in specialized psychiatry centers, alongside with the considerable insufficiencies caused to patients. Thus, the study of respiratory pattern could offer to physicians, especially at the primary level, an alternative to the pharmacological treatment, by correcting the psychophysiological mechanisms of systemic dysfunctions development.

Aim of the study. This study is focused on evaluating changes in the respiratory rhythmogenesis in people with borderline type personality disorder, by analyzing the respiratory pattern, and on the clinical approach of the obtained results.

Materials and methods. In the study were involved 95 people aged between 19 and 60 that were given a questionnaire about personality disorders PID-5. Based on the results, the subjects were divided into two groups: the control group (n = 64) and the group of people with borderline type personality disorder BPD (n = 32). The experimental protocol included the parameters of the respiratory pattern in 3 functional samples, recorded with the VisuResp plethysmograph: resting (R) - 5 min, hyperventilation (HV) - 3 min and post hyperventilation (postHV) 5 min.

Results. In the R sample of the BPD group, was found a decrease of the following parameters of the respiratory pattern, compared to the control group: the current volume by 21%, the duration of the inspiration with 10.3%, the duration of the respiratory cycle by 12.1%; however, in the same sample, the breathing frequency was increased by 11.5%. In the postHV sample, the statistical differences in the parameters of the respiratory pattern in the PBD group, compared to the control group, are also observed: increased current volume with 21.5%, duration of the expiration by 52.1% and average inspiratory flow with 13.1%, but decreased duration of inspiration by 7.2% and the total duration of the respiratory cycle by 33.9%. The increased respiratory flow due to the increased current volume, explains the decrease of the CO₂ concentration by 17.3%. Therefore, we found out that hyperventilation has a more substantial impact on the respiratory pattern in people with BPD, compared to the control group.

Conclusions. People with BPD breathe in smaller volumes, but more frequently compared to the control group, without differences in respiratory flow. The hyperventilation sample highlights the changes in the respiratory pattern of healthy persons compared to people with borderline type personality disorder, probably due to changes in the cortical and subcortical structures that are responsible for the voluntary and involuntary control of breathing.

Key words: Borderline Personality Disorder, respiratory pattern, PID

280. THE IMPORTANCE OF LIGHT AND DARKNESS IN THE DEVELOPMENT OF THE CIRCADIAN RHYTHM

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Introduction. Currently, in the world, nights are extremely illuminated, whereas during daytime people are exposed to dim light conditions. Exposure to artificial light at night results in a disruption of the circadian system and melatonin suppression associated with an increased prevalence of numerous diseases.

Aim of the study. The aim of this review was to assess the current information regarding the influence of light and dark on the secretion of human melatonin.

Materials and methods. A broad English search was undertaken of the PubMed and Scopus database for the terms "melatonin suppression", "melatonin and light", articles from 2010-2020 were selected.

Results. Studies have shown that light-induced nocturnal melatonin suppression may be affected by intensity (350-1000 lx was sufficient to significantly suppress melatonin levels), wavelength (459 nm to 484 nm), time of exposure (5 seconds-6,5 h), temperature (6500k induced greater suppression). Appropriately timed light exposure has been shown to phase-shift human circadian rhythms. More prolonged exposure to light during the day (summer, bright environment) might reduce melatonin suppression at night, blue light having a more acute preventive impact. Light influences melatonin's functions, increasing the risk for diabetes type 2, heart disease, obesity, some types of cancer, depression, bipolar disorders.

Conclusions. Further research assessing the impact of light on melatonin secretion should be undertaken considering the following factors: alcohol consumption, age, eye color, posture, phase of the menstrual cycle, administration of oral contraceptives, physical exercise, pupil size, sleep pattern and clearly indicating the details of the experimental protocol.

Key words: melatonin suppression, light, circadian rhythm, light at night

281. THE CIRCADIAN RHYTHM – THE MEDICAL AND SOCIAL IMPORTANCE

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