Abstract

Neurodegenerative and psychiatric disorders are an important issue, affecting a great part of our population. Recently, awareness of sleep disturbances and circadian rhythm dysfunctions accompanying these diseases is growing. Although the cause of circadian clock malfunctions in neuropsychiatric disorders remains to be elucidated, they have a destructive impact on quality of life of both patients and their caregivers. Thanks to our knowledge on molecular mechanisms of the circadian clock and novel techniques, it becomes possible to study the state of the central pacemaker, as well as its' output rhythms. This thesis provides a summary of data suggesting an important role of circadian system malfunctions in patients suffering from neurodegenerative and psychiatric diseases. In some cases, these data also suggest new therapeutic approaches, which could in the future help to ameliorate the patients' quality of life, by improving the functioning of their circadian system.

Key words: neuropsychiatric disease, circadian system, human, melatonin, clock gene