Circadian rhythm and affective disorders

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Abstract

Introduction: The study of molecular clock mechanisms in psychiatric disorders is gaining significant interest due to data suggesting that a misalignment between the endogenous circadian system and the sleep-wake cycle might contribute to the clinical status of patients suffering from a variety of psychiatric disorders, including affective disorders.

Objectives: The aim of this study is to review scientific literature regarding the circadian rhythm and its effect on affective disorders.

Methods: A non-systematic review of English scientific literature was conducted, through research in the PubMed search engine, using the keywords "Circadian Rhythm" and "Affective Disorders".

Results: Mood disorders such as major depressive disorder and bipolar may be more prevalent in individuals that are born with an abnormally shifted or arrhythmic clock. Indeed, abnormal circadian rhythms in a variety of bodily functions (body temperature, plasma cortisol, norepinephrine, thyroid stimulating hormone, blood pressure, pulse, and melatonin) have been found in depressed and bipolar patients. Interestingly, these rhythms seem to return to normal with antidepressant or mood stabilizer treatment and patient recovery. Furthermore, genetic sleep disorders such as familial advanced phase sleep syndrome or delayed sleep phase syndrome are both highly co-morbid with depression and anxiety.

Discussion and Conclusions: The connection between mood disorders and circadian rhythms is becoming increasingly clear. Studies examining the biology behind this association and the clock’s influence on mood are now being conducted. These studies should provide valuable information in terms of our overall understanding of the development of mood disorders and the most appropriate ways to treat them.