Interventions for Sleep Disturbance in Bipolar Disorder

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KEYWORDS

• Bipolar disorder • Sleep disturbances • Psychological interventions

KEY POINTS

- Sleep disturbance is associated with decreased quality of life and mood relapse in bipolar disorder.
- Sleep disturbance persists at high rates in bipolar disorder despite adequate pharmacologic treatment for mood disturbance.
- Cognitive behavioral therapy for insomnia leads to clinically significant and sustained improvement in sleep for chronic insomniacs.
- Adjunctive nonpharmacological sleep intervention, drawing upon principles from cognitive behavioral therapy for insomnia, interpersonal and social rhythm therapy, and motivational interviewing, is a viable treatment for sleep disturbance in bipolar disorder.
- Psychological interventions for sleep disturbance are advantageous in that they have few adverse effects, may be preferred by patients, are durable, and have no abuse potential.

INTERVENTIONS FOR SLEEP DISTURBANCE IN BIPOLAR DISORDER

Bipolar disorder is a common, severe, and chronic disorder. It is often life-threatening, with approximately 1 in 5 individuals completing suicide.[1] The lifetime prevalence of Bipolar I and II is 1% and 0.5%, respectively,[2] although more liberal definitions of hypomania identify many more patients with bipolar spectrum disorder. Bipolar disorder type I is defined by the presence of at least 1 manic or mixed episode. Bipolar II requires at least 1 hypomanic episode and at least 1 major depressive episode.[2] The impact that episodes of mania or depression have on the person's life is enormous. After the onset of the disorder, individuals with bipolar disorder who have been hospitalized spend approximately 20% of their life in episodes[3] and approximately 50% of their time unwell.[4] Not surprisingly, bipolar disorder is ranked as one of the top 10 leading causes of disability worldwide.

There have been important advances in pharmacologic and nonpharmacologic treatments for bipolar disorder. However, even with continued adherence, many patients remain seriously symptomatic in the interepisode period,[5] and the risk of relapse over 5 years is as high as 73%.[6] In response to these high relapse rates, research continues to try to improve pharmacotherapy and also to develop adjunctive psychosocial treatments.[7] The latter include interpersonal and social rhythm therapy (IPSRT), family therapy, psychoeducation and cognitive behavior therapy (CBT) administered individually or in groups, as well as combination approaches. Even with the

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combination of pharmacologic and adjunctive interventions, the rates of relapse remain of concern, and many individuals remain highly symptomatic between episodes.[7]

WHY IS SLEEP IMPORTANT IN BIPOLAR DISORDER?

Bipolar Disorder and Sleep Disturbance Often Coexist

Reduced need for sleep is a classic symptom of mania. During episodes of depression, insomnia, or hypersomnia are common. Even in the interepisode period, sleep is disturbed; up to 70% of bipolar disorder patients report insomnia,[8] which is associated with risk for relapse and suicide attempts.[9] Hypersomnia is experienced by roughly 25% of bipolar 1 patients during the interepisode period,[10] and by 40% to 80% of these patients during episodes of depression.[11] Sleep disturbance is characteristic across the bipolar spectrum. In fact, total sleep time is shortest in bipolar disorder–not otherwise specified, relative to bipolar 1 disorder and bipolar 2 disorder, but the 3 subtypes are equally impaired in night-to-night variability.[12] Mean variability in total sleep time across a week in bipolar patients is approximately 2.78 hours (SD = 3.02),[12] almost equivalent to flying from the east to west coast of continents like North America and Australia. The human circadian rhythm cannot easily adapt to these fast shifts. Indeed, in interepisode bipolar disorder, lower and more variable sleep efficiency and variability in falling asleep time are related to worse illness course and outcome.[13] Relative to the interepisode phase, sleep disturbance escalates just before an episode, worsens during an episode,[14–16] and does not always resolve with medication. Among individuals treated with best practice mood stabilizers in Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD),[17] 66% still experienced significant sleep disturbance.[12,18]

Sleep Disturbance Contributes to Affective Dysregulation

Multiple studies suggest that sleep disturbance contributes to affective dysregulation in bipolar disorder:

a. Sleep disturbance is a common prodrome of relapse.[16]
b. Short sleepers exhibited more symptoms of mania, depression, anxiety and irritability, lower scores on functioning and life satisfaction compared with bipolar disorder patients with longer sleep times.[12] Moreover, shorter total sleep time was associated with increased mania and depression severity over 12 months[18]
c. In a 7-day diary study, total wake time was associated with next-day morning negative mood in bipolar disorder, while evening negative mood was associated with subsequent total wake time in both bipolar disorder and insomnia[19]
d. Experimentally-induced sleep deprivation is associated with the onset of hypomania or mania[15]
e. Sleep has a critical mood regulatory function, and sleep deprivation involves the loss of top-down inhibitory control usually exerted by medial prefrontal cortex on amygdala[20]
f. Circuits involved in emotion regulation and sleep regulation interact in bidirectional ways.[21] In sum, sleep disturbance is a pathway leading to affective instability and relapse by means of well-recognized neural circuits.

Sleep Disturbance Contributes to Interepisode Functional Impairment

Even with good adherence to medication, many patients with bipolar disorder remain seriously symptomatic in the interepisode period. Clinically significant insomnia is one of the most common residual symptoms.[8] Insomnia in itself has a significant negative psychosocial, occupational, health, and economic impact.[22] The authors' analysis of STEP-BD data indicates that sleeping less than 6.5 hours per night is associated with greater symptom severity and greater impairment relative to sleeping 6.5 to 8.5 hours.[18]

Taken together these, data highlight the complexity and multiple sleep disturbances that are characteristic of bipolar disorder (insomnia, hypersomnia, delayed sleep phase, irregular sleep–wake schedule, reduced sleep need) and the importance of an intervention to improve sleep as a pathway for improvement of mood and reducing impairment.

MANAGING SLEEP DISTURBANCE IN BIPOLAR DISORDER

Pharmacologic treatment of bipolar disorder is inseparable from the treatment of sleep disturbance. Here the focus is on describing a nonpharmacologic approach because

1. There are fewer adverse effects or interactions with other treatments for the bipolar disorder and other conditions
2. Although hypnotics are efficacious and clinically indicated in some situations (eg, acute insomnia), concerns remain about the durability,