Can mood stabilizers reduce chronic pain in patients with bipolar disorder?

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Mood stabilizers have been increasingly used in the treatment of patients with bipolar disorder who also suffer from chronic pain. A recent study conducted at the Missouri University Psychiatric Center, an inpatient psychiatric ward, aimed to evaluate the effectiveness of treating chronic pain in patients with bipolar disorder using mood stabilizers. 

The study focused on 73 inpatients experiencing exacerbation of bipolar I disorder who also had chronic pain. These patients were treated with mood stabilizers, including lithium and carbamazepine. Patients also were taking medications, as needed, for agitation and their home medications for various medical problems. Selection of mood stabilizer therapy was non-random by standard of care based on best clinical practices. Dosing was based on blood-level monitoring adjusted to maintain therapeutic levels while receiving inpatient care. The average duration of inpatient treatment was approximately 1 to 5 weeks.

Pain was measured at baseline and compared with daily pain scores after mood stabilizer therapy using a 10-point scale, with 0 for no pain to 10 for worse pain, for the duration of the admission. As expected based on the findings of previous research, carbamazepine resulted in a decrease in average daily pain score by 1.25 points after treatment ($P = .048; F$ value = 4.3; $F$-crit = 4.23; calculated by one-way analysis of variance). However, patients who received lithium experienced a greater decrease in average daily pain score, by 2.17 points after treatment ($P = .00035; F$ value = 14.56; $F$-crit = 4.02).

To further characterize the relationship between bipolar disorder and chronic pain, we looked at change in pain scores for mixed, manic, and depressive episodes of bipolar disorder by Clinical Global

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Impressions—Improvement (CGI-I) Scale categories (Figure). Participants who experienced the greatest clinical improvement also experienced the highest degree of analgesia. Those in the “Very much improved” CGI-I category experienced an almost 3-point decrease in average daily pain scores, with significance well below threshold ($P = .0000967; F$ value = 19.83; $F$-crit = 4.11). Participants who showed no change in their bipolar I disorder symptoms or experienced exacerbation of their symptoms showed a significant increase in pain scores ($P = .037; F$ value = 6.24; $F$-crit = 5.32).

Our data show that lithium and carbamazepine provide clinically and statistically significant analgesia in patients with bipolar I disorder and chronic pain. Furthermore, exacerbation of bipolar I disorder symptoms was associated with an increase of approximately 4 points on a 10-point chronic pain scale. While lithium and carbamazepine already are frequently used to treat patients with bipolar disorder, these medications may be particularly helpful for those with comorbid chronic pain.

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References