

Quick Review of Model System Research

Efficacy of Venlafaxine XR for the Treatment of Pain in Patients With Spinal Cord Injury and Major Depression: A Randomized, Controlled Trial¹

What is the study about?

This study examined the effectiveness of the medication Venlafaxine in treating pain in people with Spinal Cord Injury (SCI). The medication, Venlafaxine XR, is a treatment for major depressive disorder (MDD). In addition to measuring its effectiveness for treating depression, the researchers were interested in measuring the effectiveness of the medication on nerve and musculoskeletal pain.

Who participated in the study?

There were a total of 123 study participants: 92 men and 31 women. In order to be included, participants had to have experienced some level of SCI at least 1 month before the study, be between the ages of 18 and 64, and meet a cutoff score on the Patient Health Questionnaire, a screening measure for depression. Participants also needed to be diagnosed with major depression or dysthymia based on the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition.

How was the study conducted?

This was a double-blind, randomized-control trial (RCT). Participants were recruited from outpatient SCI clinics, research registries, and community settings. Treatment occurred over a twelve-week period. Participants were randomly assigned to receive either venlafaxine XR or a placebo. The starting dose was 37.5mg/d and could be increased at weeks 1, 3, 6, 8 and 10 based upon how a patient responded. The highest possible dose, 300mg, was used for participants during weeks 8 to 10 if their depression had not improved. Study participants identified up to three locations where they felt pain. Researchers noted the type of pain subjects felt using the Spinal Cord Injury Pain Instrument (SCIPI). Subjects were asked to measure their pain on a 0-10 scale at the 6 and 12 week mark.

What did the study find?

The results showed that venlafaxine XR and the placebo provided similar results treating nerve pain. However, venlafaxine XR was more effective than placebo at reducing musculoskeletal pain, or a combination of nerve pain and musculoskeletal pain. It might be helpful for individuals with SCI and MDD, especially because it has relatively few side effects compared to other pain treatment medications.

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¹ Richards, J. S., Bombardier, C. H., Wilson, C. S., Chiodo, A. E., Brooks, L., Tate, D. G., . . . Fann, J. R. Efficacy of Venlafaxine XR for the Treatment of Pain in Patients With Spinal Cord Injury and Major Depression: A Randomized, Controlled Trial. *Archives of Physical Medicine and Rehabilitation*, 96(4), 680-689. doi: 10.1016/j.apmr.2014.11.024