

New Case Report Shows Improvement in Anxiety and Cortisol Levels



Measuring cortisol levels in saliva has long been used as a measure for adrenal function (which is an indicator of long-term stress on the endocrine system). A recent case report published in the Journal of Contemporary Chiropractic has followed an interesting case – when a patient presented with neck pain and headaches but left with an improvement in other, non-musculoskeletal symptoms.

The premise behind chiropractic is simple: when we nurture the nervous system and ensure it is operating optimally, free of subluxations, then we are setting up the body so that it can adapt, heal and express life as best it can. It isn't about treating symptoms. It's about allowing the body to operate free from distortions so it can heal itself.

Based on this premise, it shouldn't be surprising that sometimes a patient presents with one set of symptoms, and walks away with a set of benefits they hadn't envisioned. One such case involved a forty-year-old female patient who presented with headaches and neck pain which were having a negative impact on her activities of daily living. Her medical history revealed a "history of anxiety which worsened with increasing severity of her musculoskeletal complaints [1]."

As research reveals, it is not at all uncommon for anxiety or depression to present alongside chronic pain.

Her history of neck pain and headaches wasn't a long one: two weeks of chronic and recurring pain that seemed to be exacerbated by an increase in desk and computer work. It improved with movement and worsened while sitting and especially toward the end of the day, causing problems with sleep. She had not been evaluated elsewhere for anxiety, but scored a 15 on the GAD-7, which is "a valid assessment for Generalized Anxiety Disorder." In fact, her scores indicated severe anxiety.

Upon presentation, the attending chiropractor ran a number of tests to ascertain her overall condition. These included radiographic examinations of the cervical and thoracic spine, the Neck Pain Disability Index, the PHQ-4 and GAD-7 questionnaires which measure anxiety and depression, and saliva samples to measure "enzyme-linked immunoassay (ELISA) to study correlation with perceived anxiety and to ascertain whether or not cortisol levels were impacted by treatment."

The case report details the thorough chiropractic examination, which encompassed a battery of common tests and guided the chiropractor's decisions in managing the patient. (You can check out the details at the case report referenced below). The patient commenced a 6-week, 12-session course of care in which the chiropractor used Diversified Technique to correct her subluxations. She was also treated with "Instrument-Assisted Soft-Tissue Mobilization, and an at-home exercise program.

Re-evaluations occurred at the 2-week mark and after the final visit. While there were steady improvements at the 2-week mark (including improvements in the frequency and severity of her headaches, and a reduction in anxiety), the final visit showed some marked results.

- ~ Her Neck Pain Disability Index had dropped from 60% to just 6%.
- ~ Her headaches had resolved, as did her sleep difficulty.
- ~ She reported greater ability to undertake the activities of daily living that she had difficulty with only 6 weeks prior.
- ~ A re-assessment of the GAD-7 came up with a negative result for Generalized Anxiety Disorder and her salivary cortisol levels had halved.

Of course, this is a case report, so no generalizations can be made, and additionally, the home exercise program and instrument-assisted soft tissue work also contributed to her outcome. Both of these factors are limitations in the study. However, all were undertaken as part of her chiropractic management.

We already have research on chiropractic, neck pain and headaches, which indicates that chiropractic care may be helpful. What we don't have is decisive research on salivary cortisol, anxiety and chiropractic care.

It is the latter that makes this case report an interesting one. The study's author remarked that "given the prevalence of both anxiety and chronic pain, the frequency at which they co-occur and the significant individual, social and economic burden that is associated with these conditions along with the demand for complementary and alternative approaches that seemingly exists, there is a need for further research into the role chiropractic may play in mental health."

We couldn't agree more.

References

Hughes F (2020), "Reduction of Cortisol Levels and Perceived Anxiety in a Patient Undergoing Chiropractic Management for Neck Pain and Headache: a Case Report and Review of the Literature," *Journal of Contemporary Chiropractic*, <https://journal.parker.edu/index.php/jcc/article/view/95> retrieved 31 March 2020