

# Radiosurgery reduces depression and improves quality of life for patients with facial pain

July 3 2017

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Doctors should consider radiosurgery earlier for patients with severe facial pain, according to a new study in the *International Journal of Radiation Oncology\*Biology\*Physics* (the "Red Journal") - the official journal of the American Society for Radiation Oncology (ASTRO).

In the research, radiosurgery helped improve the quality of life for patients with trigeminal neuralgia and reduced their depression, which is often exacerbated by the side effects of other treatments. The authors, from Cleveland Clinic in the US, say considering radiosurgery earlier on could make a big difference to patients' lives.

Trigeminal neuralgia (TN) is a very painful nerve disorder that causes an electrical shock feeling in the face, usually in older people. Some things can trigger it, like chewing or even the wind blowing, but attacks can be random. On a scale of 1-10, patients often describe the pain as 15 - off the scale. TN is commonly treated with anti-epileptic medications. While this can reduce the pain, it makes patients drowsy and tired, and they report feeling drunk. This has an impact on their quality of life and frequently causes depression, as it stops them from driving, working or even just leaving the house.

According to the new study, radiosurgery, which is normally a second line [treatment](#) to be used following the medication, helps improve quality of life and reduce depression in patients with TN. By considering

it earlier as a treatment option, doctors could help improve the lives of patients with TN more quickly.

"We knew radiosurgery results in pain relief, but we didn't know if the patients actually felt better," said Dr. Samuel Chao, corresponding author of the study. "I think people go and see their neurologist and get the pain under control with medication, but they don't realize how lousy this can make them feel. Using radiosurgery earlier on allows patients to get off the medications, improving their quality of life by allowing them to return to activities they used to do."

Radiosurgery is a method for physically treating the nerve using radiation - with [stereotactic radiosurgery](#), doctors can focus 192 beams of radiation on a single point. It is non-invasive, so doesn't require the healing time of traditional surgery. Treatment takes less than an hour and requires no anesthetic. However, it is often overlooked or delayed as a treatment because there is a lack of capability and experience with the method. Research has shown that radiosurgery reduces pain for 80% of patients, but the broader impact on their lives remained unknown.

In the new study, Dr. Chao, Dr. Kotecha and his colleagues prospectively collected data from 50 patients they treated with radiosurgery using two questionnaires: EuroQOL 5-Dimension and Patient Health Questionnaire 9. They asked questions about the patients' pain and facial numbness, their health and their ability to take care of themselves. The researchers analyzed patients' answers before treatment and at each follow-up appointment, and found that [patients](#) reported an improved quality of life and lower rates of depression after radiosurgery. Importantly, the benefit of treatment was strongly driven by improvements in pain and discomfort as well as self-care.

"Pain and the medication to stop the pain make it difficult for people with TN to go outside and live life," explained Dr. Chao. "With

[radiosurgery](#), we can reduce [pain](#), improve quality of life and decrease depression - people can go out and enjoy [life](#) without worrying they will have a random attack. Giving options empowers the patient to be more aware of themselves and manage their own condition."

The team plans to analyze the impact of other treatment options and carry out a cost-based analysis to establish the best treatment options for TN.

**More information:** Rupesh Kotecha et al, Stereotactic Radiosurgery for Trigeminal Neuralgia Improves Patient-Reported Quality-of-Life and Reduces Depression, *International Journal of Radiation Oncology\*Biology\*Physics* (2017). [DOI: 10.1016/j.ijrobp.2017.04.008](https://doi.org/10.1016/j.ijrobp.2017.04.008)

Provided by Elsevier

Citation: Radiosurgery reduces depression and improves quality of life for patients with facial pain (2017, July 3) retrieved 17 May 2023 from <https://medicalxpress.com/news/2017-07-radiosurgery-depression-quality-life-patients.html>

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