

New Surgical Procedure Holds Promise for Permanent Relief from Migraines Caused By Occipital Neuralgia



Ziv M. Peled, MD is a Board-Certified plastic surgeon trained to perform the full spectrum of aesthetic and reconstructive plastic surgical procedures. He completed his medical school training at the University of Connecticut School of Medicine where he earned honors in multiple surgical disciplines. In addition to his cosmetic and reconstructive work, Dr. Peled helped to found a peripheral nerve surgery institute here in San Francisco. In that institute, he served as Director and Chief Plastic & Peripheral Nerve Surgeon. His specific training enables him to perform a unique set of surgical procedures designed specifically to restore sensation and minimize/eliminate pain in patients suffering from migraines as well as neuropathy due to diabetes, chemotherapy and thyroid disorders. He has also treated many patients with various forms of nerve trauma as well as many other types of nerve disorders. Dr. Peled has authored and co-authored over 40 manuscripts and book chapters on all aspects of plastic surgery and has presented his work at numerous national meetings.

Traditional theories of migraine headaches postulate some process within the central nervous system as the underlying cause for a patient's symptoms. However a more recent school of thought suggests that there are peripheral nerve triggers within the head and neck that are responsible for the perception of a migraine. More specifically, irritation, compression, or traction on peripheral nerves within the forehead, temporal region and/or occipital areas have been shown to be causal factors for the migraine headaches experienced by many patients.

Existing treatments for migraines typically include oral medications or injected drugs and while occasionally helpful, these modalities usually only temporarily alleviate symptoms or help control them once they appear. For these reasons, many migraine patients undergo various types of spinal injections and even have nerve stimulators implanted in an effort to ameliorate the pain on a more permanent basis. It is important to note, however, that such treatments are focused primarily at controlling the symptoms of the headache, but do not address the underlying cause as it is presumed to be incompletely understood. On the other hand, if the headache pain is demonstrated to be secondary to occipital neuralgia (e.g. compression of a nerve such as the greater occipital nerve), then a novel surgical procedure can be performed to permanently decompress the offending nerve thereby reducing or even eliminating the source of the pain.

It is estimated that migraines affect over 28 million people in the United States alone. The annual cost to the healthcare system in terms of ER visits, medications, injections and lost productivity is estimated to be in the range of \$15 billion per annum. Fortunately, the surgical treatment noted above has shown extremely promising results. A recent study from Georgetown University followed 190 patients who had migraines secondary to occipital neuralgia and who underwent surgical decompression. At an average follow-up of one year, 80.5% of patients experienced 50% or greater pain relief and over 40% of patients experienced complete relief of their headaches (Ducic, et al, *Plastic and Reconstructive Surgery*, May, 2009, 1453-1461).

Moreover, a study published just this month demonstrates that at 5 years, these benefits persist with continued reductions in both headache severity, frequency, and duration (Guyuron, et al, *Plastic and Reconstructive Surgery*, February, 2011, 603-608). These patients who have migraine headaches caused by occipital neuralgia have a headache etiology similar in origin to symptoms experienced by those with carpal tunnel syndrome, a commonly diagnosed condition for which surgical decompression is frequently performed.

During these procedures, peripheral nerve surgeons such as Dr. Ziv Peled decompress nerves in the neck, temples or forehead that are pinched as they pass through various anatomic structures or canals. Based upon Dr. Peled's experience, complication rates are extremely low and patients often describe a profound relief in their symptoms and a significantly improved quality of life.