Surgery for chronic temporal headaches—simplified approach shows good results

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A modified surgical technique may provide a simpler approach to the surgical treatment for one type of chronic headache, according to an "Ideas and Innovations" paper in the May issue of *Plastic and Reconstructive Surgery*, the official medical journal of the American Society of Plastic Surgeons (ASPS).

Using an incision originally designed for another purpose, surgeons can gain direct access to the nerves involved in some types of chronic temporal headache, according to the report by ASPS Member Surgeon Dr. Ziv M. Peled of Peled Plastic Surgery, San Francisco. He hopes his new technique will "lower the bar to adoption" of effective surgical treatment for patients with this debilitating headache condition.

Efficient Approach to Surgery for Chronic Temporal Headache

In recent years, surgery has emerged as an effective treatment option for selected patients with chronic, severe headaches. Developed by plastic surgeons who noticed that some migraine patients had fewer headaches after cosmetic forehead-lift, these procedures address "trigger sites" linked to certain headache patterns.

Severe temporal headaches can result from muscle spasms or enlarged blood vessels putting pressure on specific nerves located on the side of

the head—specifically, the zygomaticotemporal branch of the trigeminal nerve (ZTBTN) and sometimes the auriculotemporal nerve (ATN). During these operative procedures, surgeons seek to relieve pressure on these nerves or to disconnect the nerves in order to prevent them from triggering future headaches.

The technique is a new use of an approach that many surgeons are already familiar with: the Gillies incision, used for surgical repair of cheekbone fractures. Dr. Peled found that this short incision, placed in the temple behind the hairline, provides direct access to the ZTBTN and ATN. He describes his initial experience with the new approach in 19 patients.

All patients had chronic temporal headaches that did not improve with medications. They also had a positive result on preoperative testing—either injection of botulinum toxin (Botox) to temporarily block muscle activity, or local anesthetics to temporarily block the involved nerve. Before and after surgery, headache symptoms were assessed using a standard score, the Migraine Headache Index (MHI).

As in previous studies, surgery provided significant relief from chronic temporal headaches. Average MHI score decreased from about 132 points before surgery to 52 points afterward. Of the 19 patients, 16 had at least a 50 percent reduction in headache symptoms.

It's unclear why the three remaining patients didn't have good improvement, although Dr. Peled notes that two of the three had had temporal headaches for decades before surgery. None of the patients experienced complications, and there was little or no visible scarring.

The experience supports a growing body of research showing good outcomes with surgery for chronic temporal headaches. Most recently, a study in *Plastic & Reconstructive Surgery* reported similar results whether

the nerve is decompressed or disconnected. However, previous studies have used technically more complex approaches to access the ZTBTN.

The simplified approach using the Gillies incision combines the advantages of other approaches to chronic temporal headache surgery while minimizing the disadvantages, Dr. Peled believes. He comments, "This is a straightforward technique and effective procedure that may make it easier for plastic surgeons to adopt and offer surgical options for patients with this debilitating condition."

More information: Ziv M. Peled. A Novel Surgical Approach to Chronic Temporal Headaches, *Plastic and Reconstructive Surgery* (2016). DOI: 10.1097/PRS.0000000000002051

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