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After receiving his undergraduate degree with high honors in Biology from Harvard University, Dr. Brisman obtained his medical degree from Columbia College of Physicians and Surgeons. He then completed a General Surgery internship and Neurological Surgery Residency at The Mount Sinai Medical Center in New York City.

Board certified by the American Board of Neurological Surgeons and a Fellow of the American College of Surgeons, Dr. Brisman specializes in the treatment of Trigeminal Neuralgia and Brain Tumors. He serves as the Co-Medical Director of the Long Island Gamma Knife® Center at South Nassau Communities Hospital and he has served as the Chief of Neurosurgery and Co-Director of the Neuroscience Institute at NYU-Winthrop Hospital. In addition, Dr. Brisman has formerly served as President of both the Nassau County Medical Society and the New York State Neurosurgical Society.

DR. BRISMAN TREATS:

- Trigeminal Neuralgia
- Brain Tumors
- Pituitary Tumors
- Acoustic Neuromas
- Meningiomas
- Brain Metastases
- Gliomas
- Hemifacial Spasm
- Glossopharyngeal Neuralgia
- Skull Tumors
- Brain AVMS

Dr. Brisman is proficient in the use of minimally invasive neurosurgical procedures including:

- Stereotactic Radiosurgery
- Gamma Knife®
- CyberKnife®
- Novalis Tx®
- Microvascular Decompression
- Neuroendoscopy
- Transsphenoidal Endoscopic Surgery
- Stereotactic-guided Craniotomy
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TIC TALK: A TRIGEMINAL NEURALGIA | FACIAL PAIN NEWSLETTER | SUMMER 2019 (VOL. 1, NO. 2)

SEPARATING THE TICS FROM THE TACS

Two conditions that can cause severe facial pain are Trigeminal Neuralgia (Tic Doloureux) and the Trigeminal Autonomic Cephalgias (TAC's). Both disorders can cause severe intermittent sharp facial pains.

TRIGEMINAL NEURALGIA

Trigeminal Neuralgia (TN) is a condition in which people get episodes of sudden, brief, severe, sharp pains in the area of the trigeminal nerve on one side of the face, such as the cheek, jaw, temple, forehead or eye. The pains are usually described as "electric shock" or "stabbing" in nature, will often seem to radiate towards the ear or up the face, will often be triggered by light touch of the face, and will usually respond to certain anticonvulsants such as tegretol or neurontin. Often the pain will go away for weeks or months, or years, only to recur. Some patients will have a blood vessel compressing the trigeminal nerve on an MRI Fiesta sequence. Others may have multiple sclerosis. Some will have a tumor compressing the trigeminal nerve. Often these patients will have had multiple dental procedures to try to alleviate the pain. Some patients will have a component of constant or dull pain or a sense of intermittent numbness in the face. Similar pains can occasionally occur on the opposite side of the face, but rarely at the same time. TN patients will usually respond to one of the trigeminal neuralgia procedures — surgery whereby the compressing blood vessel is surgically moved away from the trigeminal nerve (Microvascular Decompression / MVD) or techniques in which the trigeminal nerve is injured slightly, either with a needle (percutaneous trigeminal rhizotomy) or with super focused radiation (stereotactic radiosurgery).

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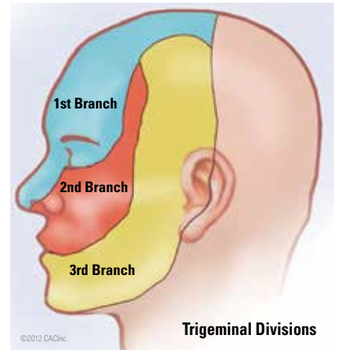
Neurosurgeon

Trigeminal neuralgia pain is usually in the lower part of the face, that is, the cheek and jaw areas. In 20 percent of the cases, the upper face area/upper division of the nerve will be involved (the eye and forehead, and top of the head). In 2 percent of the cases, the pain will only involve the upper division of the nerve. In rare cases there can be "automatic features" such as redness or tearing of the eye, swelling around the eye, slight drooping of the eyelid, nasal congestion or drainage, or flushing of the face.



Trigeminal Divisions

TRIGEMINAL AUTONOMIC CEPHALGIAS

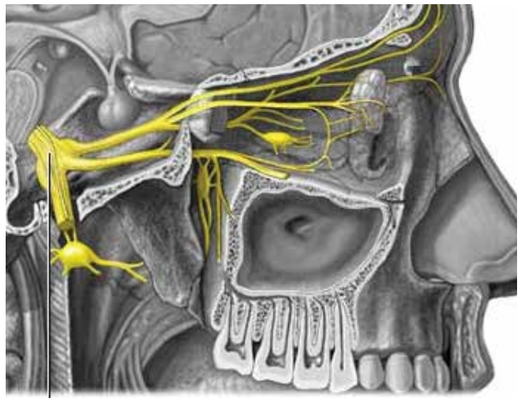
There are three diseases in the category of Trigeminal Autonomic Cephalgias:

- Cluster Headache
- SUNA / SUNCT
- Paroxysmal Hemicrania

<u>These diseases all feature severe pain in the face in the trigeminal distribution associated with "autonomic" features.</u> The autonomic features are seen in the face on the same side as the pain. <u>The pain also typically is centered in and around the eye.</u>

Cluster Headache

Cluster Headache (CH) is the most common of the Trigeminal Autonomic Cephalgias. The pain usually occurs in "clusters" (for example, every day for several weeks) then disappears for weeks to years. The pain also occurs around the same time every day, often at night. The pain usually develops over minutes, not instantly, and the attacks usually last 15 minutes to 3 hours, much longer than the brief electric shocks of trigeminal neuralgia. The pain is usually described as "sharp" or "intense."



Trigeminal nerve

Cluster Headaches usually start in young adulthood (20s-40s) and are more common in men. There may be family members with Cluster Headaches as well. The pain can be set off by alcohol consumption, and is often associated with agitation. The pain responds to sumatriptan and supplemental oxygen treatment. Attacks can be prevented with verapamil and depakote. Sometimes there are predictable symptoms ("auras") that occur before the attacks.

Cluster Headache is not usually confused with Trigeminal Neuralgia for the following reasons:

- Cluster Headache usually has prominent autonomic features, is centered around the eye, does not develop instantly, lasts for hours, occurs at the same time every day, is not described as "electric shock" in nature, and does not respond to tegretol.

SUNA / SUNCT

SUNA stands for Short-lasting Unilateral Neuralgiform headache attacks with cranial Autonomic features. SUNCT stands for Short-lasting, Unilateral, Neuralgiform headache attacks with Conjunctival injection and Tearing. SUNCT is felt to be a subcategory of SUNA. These patients will have brief, sudden, sharp, severe episodes of pain in the face, that usually center around the eye and are associated with autonomic features on the same side of the face.

Paroxysmal Hemicrania (PH)

Patients with this condition also get brief, sudden, intermittent sharp episodes of severe pain in their face. These patients also have autonomic features, and have pain that usually centers around the eye. People with paroxysmal hemicrania have an absolute response of their pain to the anti-inflammatory medicine Indocin / Indomethacin.

SUNA / SUNCT and Paroxysmal Hemicrania can be confused with Trigeminal Neuralgia.

The primary difference between SUNA /SUNCT and Paroxysmal Hemicrania is that people with Paroxysmal Hemicrania have complete relief of their pain with Indocin.

SUNA / SUNCT may just be a subcategory of Trigeminal Neuralgia, and the same as Trigeminal Neuralgia with autonomic features. SUNA / SUNCT may also have the same causes as Trigeminal Neuralgia (vascular compression for example) and may respond to the same treatments / procedures.

Four cases will be presented of patients with facial pain who were treated successfully by Dr. Michael Brisman.

CASE STUDY 1

This 49 year old man had been having episodes of severe left facial pain for 6 years. There were times when the pain had gone away completely for months. The pain was mostly in the left eye and in the back of the eye, but a little bit in the left forehead and cheek. Pain also was felt in the jaw radiating to the ear. Sometimes he would feel pain in his neck. The pain was intermittent, and could be very sharp and severe. It could develop over seconds or minutes. It could be set off by touching the left eye or the left side of the face, though sometimes, the pain would just start on its own. Sometimes he felt the left eye was a bit boggy or swollen. There could be tearing in the eye or running of the nose during the pain episodes. He tried tegretol and neurontin which did not help. Brain MRI was unremarkable.

The sudden, sharp, severe pains in the trigeminal distribution, the focus of pain around the eye, the presence of autonomic features, the normal MRI, and the lack of response to tegretol or neurontin suggested the diagnosis of Paroxysmal Hemicrania. The patient was started on Indocin, 25 mg TID. His pain immediately and completely resolved. Over time he was able to taper off the Indocin, and restart it when the pain episodes would flare up.

CASE STUDY 2

This 51 year old female presented with 3 years of worsening episodes of severe right facial pain. The pain was in and around the eye. The pain was initially more of a dull pain, but was now characterized as primarily sharp intermittent pains. She also had some burning and throbbing pains that weren't as bad or bothersome for her. Her pain was described as a stabbing pain that could be triggered by light touch or the wind. The pain could be severe, and had brought the patient several times to the emergency room. She referred to her pains as a "raging" of her face. MRI of the brain was unremarkable. She felt she might have gotten slight relief from tegretol, but not significant relief of pain. Neurontin had also not helped with the pain. She noted at times tearing of the right eye and a right nasal drip. She also noted at times that there was a swelling under the eye itself.

The sudden, sharp, severe pains in the trigeminal distribution, the focus of pain around the eye, the presence of autonomic features, the normal MRI, and the lack of response to tegretol or neurontin again suggested the diagnosis of Paroxysmal Hemicrania. The patient was started on Indocin, 25 mg BID. Her pain immediately and completely resolved but the medicine bothered her stomach. The dosage was reduced to 15 mg BID and she had excellent pain control with no side effects. Over time she was able to taper off the Indocin, and restart it when the pain episodes would flare up.

CASE STUDY 3

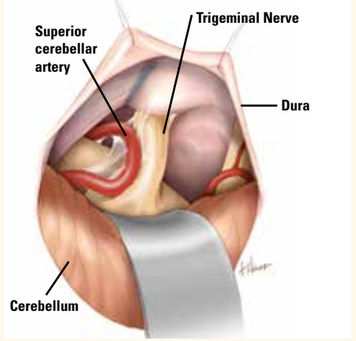
A 62 year old man presented with one year of severe, sharp, intermittent pains that began in his right eye. The pains subsequently involved his eye, the bridge of his nose, and his forehead — all in a first division trigeminal distribution. The sharp pains felt like "stabbing," but he also felt some burning pains. The pains could be set off by light touch on the face. He tried tegretol and he thought it helped some, but he had to stop it due to side effects. Upon his initial visit, he was taking neurontin and depakote and felt they had been helping but not enough and the pain was not well controlled. At times when the pain got very bad, he would experience some redness and tearing of the right eye, and slight swelling of the right eyelid. Indocin did not help. MRI showed contact of a blood vessel against the right trigeminal nerve root.

The sudden, severe, sharp pains in the right V1 trigeminal distribution in association with autonomic features, that responded to anticonvulsants and not to Indocin suggested a diagnosis of SUNA / SUNCT or Trigeminal Neuralgia with autonomic features. The patient underwent Microvascular Decompression (MVD) and had an immediate and complete relief of his pain and autonomic symptoms.

CASE STUDY 4

A 55 year old man presented with severe, intermittent, sharp episodes of "stabbing" pain in the left side of his face. The pain occurred in all three trigeminal distributions, in the forehead, eye, cheek and jaw. It could be triggered by light touch. The pains were brief and sudden, and sometimes associated with tearing of the eye or running of the nose. He had had several teeth removed in the past for the pain which had not helped. He initially had relief from trileptal, but that was no longer helping. MRI showed a blood vessel contacting the trigeminal nerve root. He was admitted through the emergency room with severe and uncontrolled facial pain refractory to high and increasing doses of trileptal and gabapentin.

The sudden, severe, sharp pains in all three distributions of the trigeminal nerve that had some response initially to trileptal along with autonomic features suggested the diagnosis of SUNA or trigeminal neuralgia with autonomic features. The patient underwent Microvascular Decompression (MVD) and had immediate and complete relief of his pain and autonomic symptoms.



Blood vessel contacting trigeminal nerve.
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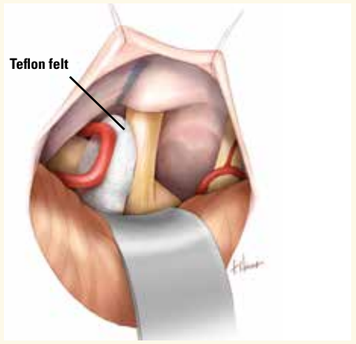

Teflon felt placed between blood vessel and trigeminal nerve.
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