

Atypical case of trigeminal neuralgia

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Presentation

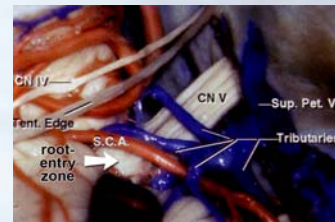
- 28 year old man presents with left sided facial pain and headache for 6 weeks
- V1 & 2 involved
- Episodes occur every 10-20 seconds in a random manner but can be triggered by touch, chewing, tooth brushing, etc.

Presentation (cont.)

- Patient received MRI with contrast as part of initial workup
- Not initially started on any medications

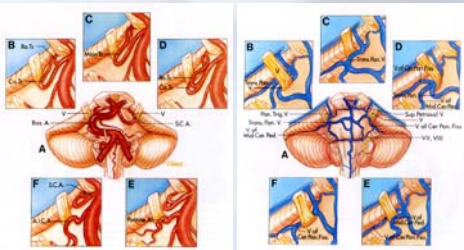
Typical trigeminal neuralgia

- Typical- Thought to be caused by vascular pulsations resulting in compression of the trigeminal nerve at the root-entry zone



Typical trigeminal neuralgia

- Most commonly by the superior cerebellar artery but can be venous



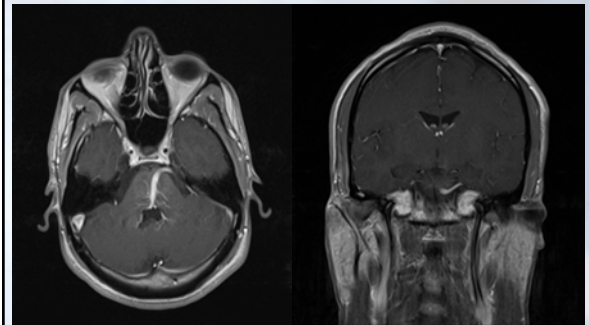
Typical trigeminal neuralgia

- Typically affects V2 & 3, rarely combines with V1
- Typically responds well to medical therapy initially:
 - Carbamazepine most commonly

Atypical trigeminal neuralgia

- Causes
 - Multiple sclerosis
 - Post-traumatic
 - Secondary
 - Tumor
 - Vascular malformations
 - Failed TN
- Does not respond well to medical therapy

MRI

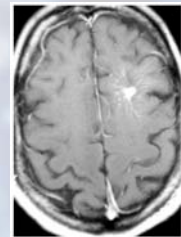


Developmental venous anomaly

- AKA “Venous angiomas”
- Dilated medullary veins that drain normal grey and white matter
- Most common intracranial vascular pathology and are largely asymptomatic
- Fetal remnants of arrested development of normal venous channels

Developmental venous anomaly

- Radiographic hallmark is the caput medusae pattern of dilated feeding veins
- Other features
 - cannot proliferate
 - are not arteriovenous shunts
 - have normal brain between feeding vessels



DVA pathology

- Can become symptomatic from compression of adjacent neural structures
- Compression syndromes
 - Hydrocephalus – Sylvian aquaduct
 - Trigeminal neuralgia – CN V
 - Hemifacial spasm – CN VII
 - Tinnitus – CN VIII

DVA treatment

- Aqueductal stenosis can be shunted or stented
- Microvascular decompression surgery can be used for peripheral cranial nerve compression
- DVA's drain normal cortex, the DVA itself is not a surgical lesion

Treatments for patient

- Medical management?
- Surgical management?
 - Microvascular decompression
 - Percutaneous injection/rhizotomy
 - Gamma knife

MVD Study

- NEJM study 1996 The Long-Term Outcome of Microvascular Decompression for Trigeminal Neuralgia of 1185 pts with a median follow-up of 6.2 yrs found success rate of 70% excellent outcomes (no pain, no meds) at 10 yrs
- 88% successful outcome @ 1 yr; 74% successful outcome @10 yrs
- Exclusions MS, tumor, aneurysm, and follow-up < 1 yr
- Post-op recurrences almost all happened in first 2 yrs
- 11% required 2nd decompression; only 42% had excellent outcomes after 10 yrs
- Predictors of **poor outcome** include: female, pre-op Sx > 8 yrs, **Venous compression**, and lack of immediate post-op relief

Barker F, Jannetta P. The Long-Term Outcome of Microvascular Decompression for Trigeminal Neuralgia. NEJM 334:1077-1084, 1996.

Patient Pending

- Patient's symptoms resolved without medication
- He has been symptom free for more than a year

Bibliography

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