the twitch
ABNORMAL MOVEMENTS OF THE FACE
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abnormal movements of the face
- Overactivity of facial muscles
- Benign myokymia
- Facial tics
- Hemifacial spasm
- Essential blepharospasm
- Meige syndrome
abnormal movements of the face

- Underactivity of facial muscles
  - Myogenic ptosis
  - Facial nerve palsy
  - Parkinsons disease

anatomy and function

- Facial nerve anatomy
  - Originates in brainstem, terminates in facial muscles
  - Two areas of interest
    - Brainstem (proximity to CN V and CN VIII)
    - Anterior to tragus of ear
      - Cervical
      - Mandibular
      - Buccal
      - Orbital
      - Frontal

branches of the facial nerve

facial muscles

orbicularis myokymia

- Spasms of individual bundles of muscle fibers
- Typically 1 of 4 lids
- Common / Younger patients
- Associations
  - Stress
  - Sleep
  - Caffeine
  - Etoh
facial tics

- **Voluntary** movements of a group of facial muscles
- Pt is typically not aware that he/she is controlling the movement
- Slightly more common in children
- Unilateral or bilateral

hemifacial spasm

- Involuntary movement of one side of the face
- May be twitch or sustained
- Etiology is vascular compression of CN VII upon leaving brainstem
- Often associated facial weakness

essential blepharospasm

- Uncontrolled blink / spasm
- By definition bilateral and involving lids
- Etiology is progressive degeneration of the CNS in the basal ganglia
- Older patients
- May present as increased blink, progressing to sustained spasm

*Important variant: Meige syndrome*
h & p
- Your P should be performed at the same time as your H...
  - Age
  - Onset
  - Character of spasm
  - Quadrants of face involved

history - clues
- Younger patient?
  - Orbital myokymia and facial tic
- Older patient?
  - BEB and HFS
- Abrupt onset?
  - Orbital myokymia (also short duration)
  - Facial tic (may follow an "event")
- No specific onset / progressive
  - BEB and HFS

exam – facial quadrants
- Facial quadrants

exam – facial quadrants
**Exam - Facial Quadrants**

- If the condition is unilateral...
  - Eye alone → probably myokymia
  - Whole side of face → probably hemifacial spasm
- If both eyes are involved...
  - r/o reflex spasm
  - Age < 50 → consider a tic
  - Age > 50 → probably blepharospasm
- If both eyes and lower face → Meige syndrome

**Diagnosis of the Overactive Face**

- Orbicularis myokymia
  - Self-limited condition
  - Rarely lasts longer than 1 week
  - Botulinum toxin may be used
  - Beware of “persistent myokymia” masquerading a more serious condition

**Treatment of the Overactive Face**

- Hemifacial spasm
  - I begin with an MRI of the brain to r/o a mass compressing the facial nerve - rare
  - More common: dolichoectatic basilar artery
  - If healthy <55 yo, Janetta procedure should be considered
  - For the majority of patients, botulinum toxin is tx of choice

- Facial tics
  - Generally treated with careful reassurance
  - In children, it is commonly a way of getting attention from parents
    - Encourage parents to ignore the tic
    - If it persists for a few months, discuss with pediatrician to explore problems at home/school
  - Adults are told that it is not a serious medical problem and that it may be stress-related
    - If they agree with this assessment, arrange for counseling

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HFS injection pattern

BEB injection pattern

Treatment of the overactive face

- Essential blepharospasm
  - Difficult disorder to treat completely
  - Tends to be progressive and lifelong
  - No oral medication proven effective
  - Considerable improvement with botulinum toxin or surgical myectomy

- Essential blepharospasm, cont.
  - Botox has been used safely for 25 yrs
  - Effective at 2 days, max at 7 days, lasts 3-4 mo
  - Increased DES due to paralysis of orbic, with diminished blink
  - Small risk of diplopia, ptosis, ectropion (6 wks)
  - If injections lose effectiveness over time, consider diagnosis: apraxia of eyelid opening

- Surgical myectomy
  - Popularized in the early 1980s
  - Upper lid muscle resection
    - Orbital orbicularis, portion of preseptal and pretarsal orbit, corrugator, procerus
  - 50% of patients still require postop botox (at a reduced dose)