An Unusual Case: 41 year old with sudden facial weakness

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Introduction

- Bell's palsy: an acute peripheral palsy involving injury of the seventh cranial nerve.
- Manifests as ipsilateral facial paralysis.
- Given the similar presentation of this condition to stroke, a time-critical illness, recognition of the unique presentation of this condition is essential.

Patient Presentation

History of Present Illness:

• 41 year-old man with history of genital herpes presents to the clinic with sudden, 1-day onset of continuous tearing of the right eye, difficulty closing the right eyelid, and skewed smile.

• Denies headache, visual deficit, dysphagia, or extremity weakness/sensory deficit.

• No prior history of similar symptoms

• Review of systems was otherwise negative

Family History:

• Both parents and a brother and sister all alive and well

Social History:

• No history of tobacco use, alcohol use, or other drug use

• Employed as a contract painter

• Immigrated from Venezuela twelve years ago. Lives alone.

Medications:

• None

Physical Exam:

• Vital Signs: afebrile, BP 110s/80s, HR 80s, SpO2 97% RA

• Neurological Examination: Partial weakness of the right side of the forehead, right sided brow droop, incomplete closure of the right eyelid, and drooping of the right corner of the mouth.

• No vesicles, scabbing, or other skin examination

• Remainder of physical exam otherwise normal

Laboratory Data/Imaging:

• No labs or imaging obtained

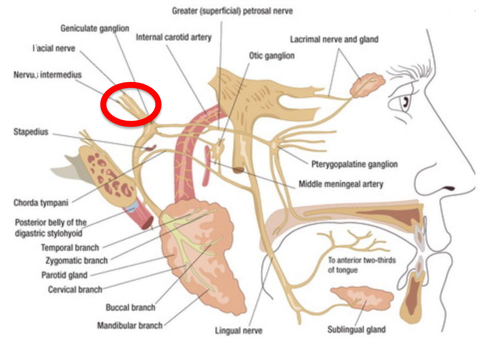


Figure 1. Distribution of the seventh cranial nerve (CNVII)

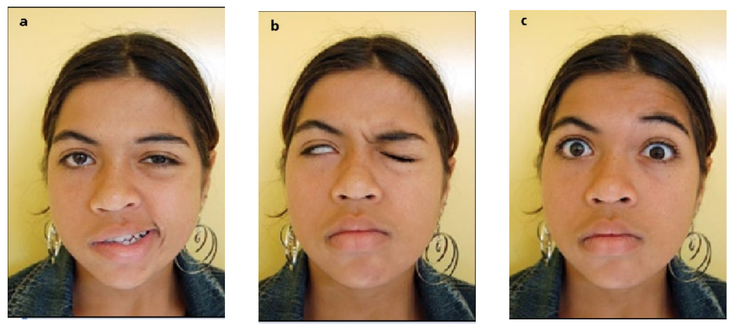
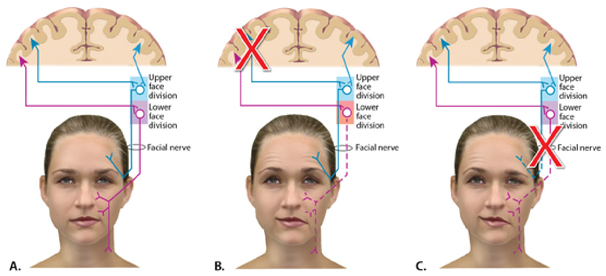


Figure 2. Signs of hemifacial Bells palsy. (a) Incomplete smile. (b) Inability to close the right eye. (c) Right eyebrow movement compromised.



	Normal	Ischemic stroke	Bell's palsy
Lesion?	-	Central lesion	Peripheral lesion
Side?	-	Contralateral	Ipsilateral
Area affected?	-	Lower	Upper and Lower

Figure 3. Distinguishing peripheral and central lesions

Discussion

- Formally known as idiopathic peripheral facial nerve palsy
- Inflammation of the seventh cranial nerve (CNVII), leading to compression of the nerve usually at the labyrinthine segment.
- Presents as acute, ipsilateral facial muscle paresis/paralysis
  - Forehead
  - Eyebrows
  - Angle of mouth
- Visceral effects may be present
  - Altered gland secretion
  - Sensory deficit
- Most severe within 3 weeks
- Cause:
  - Idiopathic
  - HSV
  - VZV, EBV, Coxsackie, Rubella, Adenovirus
- Diagnosis is primarily based on history and exam
- Further testing include electrodiagnostic, imaging, and serology
- Differential Diagnosis:
  - Stroke
  - Ramsay- Hunt
  - Tumor, GBS, Otitis media
- Management
  - Steroids within 3 days onset
  - For severe cases: coadministration of oral valacyclovir/acyclovir for 1 week
  - Eye care (artificial tear drops to prevent dryness, protective glasses/goggles, taping)
- Prognosis
  - Spontaneous recovery within 3-6 months
  - Recurrence infrequent (7-15%)

Clinical Course

• Diagnosed with Bell's palsy

• Started seven-day course of prednisone 60mg daily and valacyclovir 1mg TID

• Artificial tear drops and goggles

• Complete resolution of symptoms within one month. Has had no recurrence since then.

Teaching Point

• Peripheral lesions such as Bell's palsy result in ipsilateral weakness involving both the upper and lower face

• Central lesions such as ischemic stroke result in contralateral weakness involving only the lower face.

• Clinical translation – If there is forehead sparing, suspect a central process such as stroke!

Contact

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