

Case Report: Hemifacial Spasm as a First Sign of Imminent Death

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Abstract: **Background:** Hemifacial spasm (HFS) is characterized by tonic-clonic contractions of muscles innervated by ipsilateral facial nerve. Clinical differentials are facial spasm, facial tic, facial myokymia, blepharospasm, tardive dyskinesia and facial seizures. **Case report:** An elderly lady, presented to ENT-OPD with HFS, no associated significant history/neurological examination. Detailed evaluation revealed Intra-axial lesion in right motor cortex which required surgical excision. A serious life-threatening cause in relatively Benign ENT Out-patient, prompted us to review the literature. **Conclusion:** This case illustrates importance of considering potentially dangerous etiologies for relatively common ENT out-patient presentation. Although vascular compression of facial nerve by an ectatic vessel is considered to be most common underlying etiology. It is recommended that brain imaging is performed to ensure potential life-threatening diseases to be tackled appropriately before clinical worsening.

Keywords: Hemifacial spasm; Intra-axial lesion; Differential diagnosis; Movement disorder; Pathogenesis; Surgical treatment

1. Introduction

Hemifacial spasm (HFS) is a movement disorder of the seventh cranial nerve. Characterised by either brief or persistent, intermittent twitching of the muscles innervated by facial nerve.

Hallmark : Involuntary clonic and/or tonic contractions of the muscles of facialexpression.¹

History of Present Illness:

- A 64year old lady, presented to ENT OPD with chief complaints of left sided involuntary facial movements since 6 months.
- Sudden in onset, starting around left eye and progressing towards cheek and lips, each episode lasting for about 2-5minutes.
- No associated precipitating, aggravating or relieving factors.
- No h/o altered sensorium /behavior during episodes
- No h/o vomiting
- No h/o headache/ weakness of limbs
- No past history of any psychiatric drug use
- No H/o facial pain
- No h/s/o facial nerve palsy



Patient was able to perform all daily activities despite her symptoms

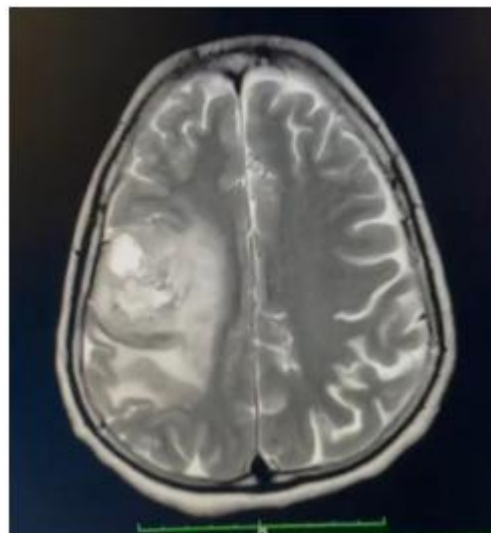
The involuntary movements appear as a short spasm starting from orbicularis oculi spreads to involve orbicularis oris and buccinator, lasting for around 2-5min. Patient was conscious, alert and responding to command during the attacks, the movements doesn't cross the midline and are similar in character between 2 episodes.

CNS: No cranial deficit or motor deficit.

Investigations

- **Detailed ENT examination :** Within normal limit
- **Audiometry:** Bilateral hearing sensitivity within normal limits except for mild loss at 8kHz.
- **MRI :** Well-defined lobulated solid-cystic mass lesion in right parietal region
- Patient underwent craniotomy and excision of lesion. Postoperative period was uneventful.

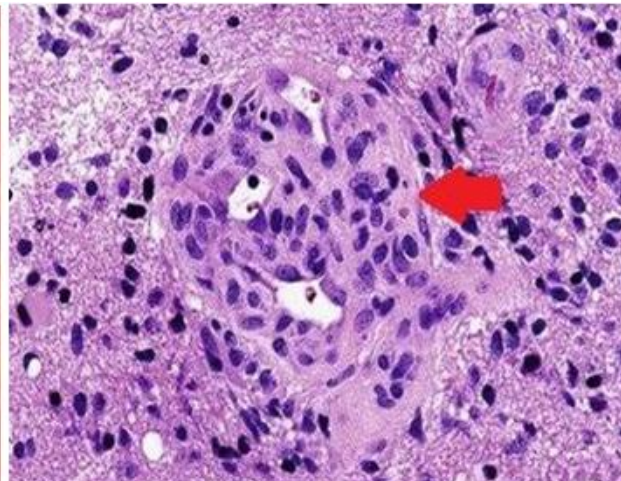
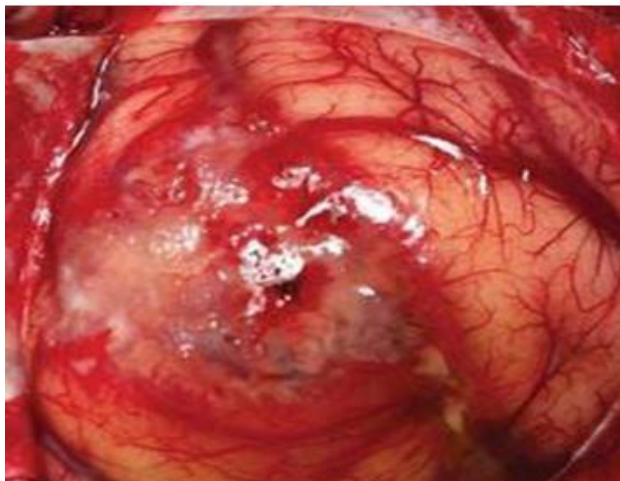
Histopathological examination: Glioblastoma Grade IV (WHO 2021 CLASSIFICATION)



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Histology showing glomeruloid appearance of a blood vessel, characteristic of microvascular proliferation. Haematoxylin & Eosin, X400

2002Aug;95(8):493-500. doi: 10.1093/qjmed/95.8.493. PMID: 12145388.

2. Discussion

Clinical Differential Diagnosis

Psychogenic facial spasm, facial tic, facial myokymia, blepharospasm, tardive dyskinesia, facial seizures.²

Etiological Differential Diagnosis

Primary HFS: Results from compression of the seventh nerve at the root exit zone in the posterior cranial fossa by an aberrant or ectatic vessel (most commonly superior cerebellar artery)

Secondary HFS

- 1) Cerebellopontine angle tumors
- 2) Epidermoid, Arachnoid cyst, Lipoma
- 3) Arteriovenous malformations
- 4) Brainstem lesions
- 5) Infections
- 6) Structural abnormalities of the posterior cranial fossa
- 7) Parotid tumors
- 8) Bell's palsy¹

3. Conclusion

- Although vascular compression of the facial nerve by an ectatic vessel is considered the most common underlying cause for HFS. This case report illustrates the importance of considering other dangerous etiologies for relatively common ENT outpatient presentation.
- This case report demonstrates the importance of MRI-brain as a crucial investigation to ensure potentially life threatening diseases are identified early and tackled appropriately before clinical worsening.

References

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