IAEM Clinical Guideline

Bell's Palsy: Management in the Emergency Department

Version 1.0

October 2023

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In Collaboration with IAEM Clinical Guidelines Committee

To reference this document please reference as:

Grace M, Heffernan L, Maguire S, Conneely C. Bell's Palsy: Management in the Emergency Department. IAEM Guidelines 2023. https://iaem.ie/professional/clinical-guidelines/ (accessed 21st September 2023)

DISCLAIMER

IAEM recognises that patients, their situations, Emergency Departments and staff all vary. These guidelines cannot cover all clinical scenarios. The ultimate responsibility for the interpretation and application of these guidelines, the use of current information and a patient's overall care and wellbeing resides with the treating clinician.

Revision History	Section	Summary of Changes	Author
V1.0	All	Final Version	MG/LH/SM/CC

CONTENTS

GLOSSARY OF TERMS

CVA	Cerebrovascular Accident
ED	Emergency Department
ENT	Ear, Nose & Throat
GP	General Practitioner
LMN	Lower Motor Neuron
NSAIDS	Non-steroidal Anti-inflammatory Drugs
SOL	Space Occupying Lesion
UMN	Upper Motor Neuron
PPI	Proton Pump Inhibitor

Bell's Palsy: Management in the Emergency Department

INTRODUCTION

There are over 50 recognised causes of facial palsy. Assessment, diagnosis, and management of facial palsy represents an important challenge for emergency clinicians due to the wide variation and significant implications of potential causative pathologies. Bell's palsy, named after Sir Charles Bell, is the most common cause of facial paralysis worldwide. It is estimated to affect between 11.5- 40.2 patients per 100,000 population per year. Diagnosis is made through thorough history and examination, with careful consideration of pertinent differentials.

Bell's palsy is defined as an acute unilateral facial nerve paresis or paralysis with abrupt onset (less than 72 hours) and without an identifiable cause. Risk factors for developing the condition include pregnancy, diabetes, hypertension and obesity.

Several causative factors have been investigated, including viral aetiology, but the exact mechanism is still unknown. Inflammation and oedema of the facial nerve within the temporal bone may lead to compression and subsequent dysfunction. The facial nerve supplies the muscles of the face, the stapedius muscle in the middle ear, the lacrimal and salivary glands, taste from the anterior tongue and tympanic membrane sensory fibres.

Incomplete palsy is associated with a better prognosis, with >90% of these patients regaining full facial function at 6 months. Of those with complete palsy, as high as 30% may be left with residual dysfunction. Long term sequelae include ocular complications, as well as significant psychological effects in those who make an incomplete recovery.

PARAMETERS

Target audience	This guideline is targeted at emergency clinicians who diagnose and manage Bell's palsy in the ED.
Patient population	This guideline is relevant for adult patients presenting to the ED with suspected Bell's palsy.
Exclusion criteria	Paediatric patients under the age of 16 are not included in this guideline.

AIM

To provide a guideline with an evidence-based approach for the assessment, management and follow up of Bell's palsy in the ED, including consideration of key differential diagnoses for facial palsy.

ASSESSMENT

Bell's palsy is a diagnosis of exclusion that depends on a thorough history and examination to rule out an alternative cause for the facial palsy.

History

- Onset of symptoms- timing and progression. Bell's palsy has a *rapid onset*, <72 hours. (A slower progressive onset of facial palsy is more suggestive of a neoplastic disorder)
- Unilateral or bilateral (Bilateral involvement suggests an alternative diagnosis)
- Recurrence
- Changes to taste or hearing (Loss of hearing may be associated with tumour or Ramsay Hunt syndrome)
- Presence of severe pain (this is more likely with severe ear infection or Ramsay Hunt syndrome)
- Irritation of the eye & tearing
- Eating or drinking issues, drooling, taste disturbance or dry mouth
- Other neurology- limb weakness, sensory changes, visual or speech disturbances, dizziness, dysphagia. These features are concerning for CVA or SOL
- Headaches/sensory changes to face
- Ear pain or discharge, rash (infective or Ramsay Hunt syndrome)
- Fever
- Recent trauma or surgery (infective, iatrogenic)
- Any recent illness/ viral illness (otitis media or Lyme infection)
- Medical background with a focus on:
    - Risk factors for differential diagnoses, including stroke
    - Red flags for intracranial pathology and head/neck tumours
    - Risk factors for Bell's palsy- diabetes, pregnancy, obesity & hypertension

Examination

- Assess at rest: Weakness of the facial muscles on the affected side may be obvious on initial inspection due to the presence of a characteristic facial 'droop' and a wide eye.
- Active movement: Examination of the muscles of facial expression includes asking the patient to smile, pucker their lips, lift their eyebrows and close their eyes. An easy way to check for activity is to observe if the patient creates the same "wrinkles" side to side when completing these expressions.
- Eye examination: Look for:
    - irritation/redness
    - lagopthalmus (inability to fully close the eye)
    - ptosis (a drooping of the upper eyelid)
    - ectropion (a drooping of the lower eyelid)
    - 'Bell's phenomenon' may be observed- the eyelids will not close and on attempted closure, the eye rolls upward and outward (if fully covered by the upper lid this is a positive Bell's, if the cornea remains exposed this is a negative Bell's).
- The House-Brackmann scale is one of several grading systems which may be used to assess severity in order to guide use of antivirals.
    - Grade I = normal
    - Grade II = slight weakness/asymmetry
    - Grade III = obvious weakness with movement but absence of disfigurement at rest; intact ability to close the eye
    - Grade IV = obvious weakness with movement and disfigurement at rest; inability to fully close the eye
    - Grade V = barely perceptible movement
    - Grade VI = no movement

- **It is key to distinguish between an UMN and LMN lesion of the facial nerve**. LMN lesions involve the upper forehead muscles, whereas UMN lesions partially spare them due to bilateral cortical supply. A useful aide memoire is ‘Upper spares Upper’.
- Full cranial nerve examination should be performed as well as inspection of the parotid gland and lymph nodes.
- Tympanic membrane examination with an otoscope should also be undertaken; vesicles suggest Ramsay Hunt syndrome.
- Finally, the peripheral nervous system should be examined to assess for any other neurological deficits.

Differentials

- CVA
- Ramsay Hunt syndrome
- Complicated Otitis Media
- Brain tumours
- Parotid gland pathology
- Lyme disease
- Guillain-Barre syndrome

MANAGEMENT

- Corticosteroids

  Prednisolone 60mg once daily x 5 days, then tapering of 10mg/day (total treatment time of 10 days)

  - Cochrane review of multiple randomised control trials has shown significant benefit in the use of corticosteroids in the treatment of Bell's palsy with shortened time to complete recovery and improved long-term outcomes.
  - Caution should be used in those with poorly controlled diabetes, immunocompromise or previous psychosis.
  - PPI prescription is generally not recommended in a patient taking high dose corticosteroids unless the patient is on a concomitant NSAIDS. This is consistent across several published guidelines.

- Antiviral Agents

  Valacyclovir 500-1000mg twice daily x 5-7 days **OR**

  Aciclovir 400mg five times daily x 10 days

  - May be offered to those with near complete or complete paralysis (House-Brackmann Grade IV- VI) within 72 hours of onset of symptoms.
  - A recent Cochrane review of the use of antivirals suggested that when used in conjunction with corticosteroids, they may reduce the long-term sequelae of Bell's palsy in comparison to placebo. Patients should be counselled that the evidence for their effectiveness is weak. There is no evidence for the use of antivirals as monotherapy. Both Acyclovir and Valacyclovir are available in Ireland; however, the Health Products Regulatory Authority does not list Bell's palsy in their therapeutic indications and patients should also be counselled that this is an off-label prescription. There is ambiguity in existing research regarding dosing; Valacyclovir requires renal dose adjustment.

Of note, use of combined antivirals and corticosteroids is recommended in Ramsay Hunt syndrome.

- Eye Care

  These strategies are aimed at preventing corneal abrasions, ulceration and keratitis due to incomplete eyelid closure. Patients should be educated on the importance of good eye care to minimise the risk of complications.

  - Lubricating eye drops or ointment – preservative free
  - Eye 'taping' or eye dome during sleep. Patches should be avoided as they can cause abrasion to the open eye.
  - Sunglasses (wrap around type)
  - Screen breaks
  - Manual blinks

- Counselling

  Patients should be counselled on prognosis, as well as red flags which would prompt urgent review, including new or worsening neurology at any point or ocular symptoms. Recovery can occur anytime from 2-3 weeks but may take up to 3-6 months and beyond. The timelines for onward referral are included below. Patient should be advised that there is no evidence for electrical muscle stimulation in the acute setting. Specialist facial therapist input offers benefit.

INVESTIGATIONS

Imaging is not indicated unless the diagnosis is unclear, or another diagnosis requires exclusion. Contrast enhanced MRI is the gold standard investigation for other causes of facial palsy.

COMPLICATIONS

- Corneal ulceration, permanent visual impairment, ‘crocodile tears’
- Persistent facial asymmetry and muscular contractures and synkinesis.
- Psychological impact, which may be underestimated. There is a significantly higher prevalence of depression and anxiety in those with chronic facial palsy when compared to the general population.

REFERRAL

Persistence of symptoms should prompt re-consideration of alternative diagnoses and referral for specialist opinion.

- 3 weeks post onset: If NO improvement in facial movement, GP review with onward referral to facial palsy clinic (if available) or ENT/Neurology/ Plastics as per local arrangements. If the eye cannot fully close by 3 weeks, referral to ophthalmology is warranted.
- 3 months post onset: If incomplete resolution of palsy, GP review with onward referral to facial palsy clinic (if available) or ENT/Neurology/ Plastics as per local arrangements.

PHYSIOTHERAPY

Recent evidence suggests that early specialist facial therapy involvement is associated with improved outcomes as well as offering benefit for those with chronic facial palsies.

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