STANDARD OPERATING PROCEDURE

Management of Bell's Palsy

(Idiopathic Facial Nerve Palsy)

Special Region (1)

Union of Myanmar

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1. PURPOSE

To provide a standardized, evidence-based approach for diagnosis, grading, and management of Bell's palsy (idiopathic peripheral facial nerve palsy) in adult patients presenting to inpatient and outpatient settings.

2. SCOPE

Applicable to:

- All adult patients (≥18 years) presenting with acute unilateral facial weakness/paralysis
- Inpatient, outpatient, and emergency settings
- Managed by Internal Medicine, Neurology, and Emergency Medicine teams

3. DEFINITIONS

Bell's palsy is defined as:

- Acute onset (within 72 hours) of unilateral, **peripheral** (lower motor neuron) facial nerve (CN VII) palsy
- **Idiopathic** — no identifiable structural, infectious (non-herpetic), or other systemic cause
- Diagnosis of exclusion after ruling out central causes, Ramsay Hunt syndrome, parotid tumors, and Lyme disease

House-Brackmann Scale

Grade	Description	Clinical Features
I	Normal	Normal facial function in all areas
II	Mild dysfunction	Slight weakness on close inspection; complete eye closure with minimal effort
III	Moderate dysfunction	Obvious but not disfiguring asymmetry; complete eye closure with effort
IV	Moderately severe dysfunction	Obvious weakness and disfiguring asymmetry; incomplete eye closure
V	Severe dysfunction	Only barely perceptible motion; incomplete eye closure
VI	Total paralysis	No movement

TYPES OF FACIAL PALSY

Type	Key Features
Bell's Palsy (Idiopathic)	Acute unilateral, no identifiable cause, presumed HSV-1 reactivation
Ramsay Hunt Syndrome	Herpes zoster, ear pain, vesicles in auditory canal
Central (UMN) Palsy	Forehead sparing, associated CNS signs
Lyme Disease	Endemic area exposure, erythema migrans, bilateral possible
Neoplastic	Slowly progressive, no recovery, parotid mass
Traumatic	History of head/temporal bone trauma

4. PATHOPHYSIOLOGY

Bell's palsy is presumed to result from reactivation of **Herpes Simplex Virus type 1 (HSV-1)** within the geniculate ganglion of the facial nerve (CN VII). Viral-mediated inflammation causes edema of the facial nerve within the narrow bony fallopian canal, leading to demyelination and ischemic injury. The resulting nerve compression causes ipsilateral dysfunction of all muscles of facial expression — a hallmark distinguishing peripheral from central facial palsy (where the forehead is spared due to bilateral cortical representation).

RISK FACTORS for Bell's Palsy

- Pregnancy (especially third trimester)
- Diabetes mellitus
- Hypertension
- Upper respiratory tract infection (preceding viral illness)
- Immunosuppression
- Obesity
- Age >60 years

5. CLINICAL DIAGNOSIS

Key Diagnostic Features

- Acute unilateral facial weakness/paralysis (onset <72 hours)
- **Peripheral pattern:** Involvement of upper AND lower face (forehead weakness — inability to wrinkle forehead)
- Ipsilateral: inability to close eye (lagophthalmos), drooping of mouth corner, loss of nasolabial fold
- ± Post-auricular pain or pain in/around the ear
- ± Altered taste (anterior 2/3 of tongue — chorda tympani involvement)
- ± Hyperacusis (stapedius muscle involvement)
- ± Decreased lacrimation or salivation

RED FLAGS — Exclude Bell's Palsy

- Forehead sparing → suspect **central (UMN)** cause → urgent brain imaging
- Vesicles in the ear canal / severe otalgia → **Ramsay Hunt Syndrome**
- Slowly progressive (>3 weeks) → suspect **neoplasm**
- Bilateral facial palsy → suspect **Lyme disease**, sarcoidosis, Guillain-Barré
- History of trauma → **temporal bone fracture**
- Parotid swelling/mass → **parotid tumor**
- Fever, meningismus → **meningitis/encephalitis**

6. INVESTIGATIONS

Baseline Workup (All Patients)

- Blood glucose (fasting/random) — exclude or identify diabetes
- Complete blood count (CBC)
- Erythrocyte sedimentation rate (ESR)
- Blood pressure measurement

Selective Investigations (As Indicated)

Investigation	Indication
MRI brain + brainstem with gadolinium	Central cause suspected, no recovery at 3 months, atypical features
CT temporal bone	Trauma, otitis media, cholesteatoma
Lyme serology (ELISA)	Endemic exposure, bilateral palsy
HIV test	Young patient, immunocompromised features
Chest X-ray / ACE level	Sarcoidosis suspected
Electromyography (EMG) / Nerve conduction	Prognostication, no recovery at 4–6 weeks

7. INITIAL MANAGEMENT

Step 1: Eye Protection (IMMEDIATE — All Patients)

Eye care is the **most urgent priority** to prevent corneal exposure keratopathy:

- **Artificial tears** (methylcellulose or hyaluronate eye drops) — every 1–2 hours while awake
- **Lubricating eye ointment** — at night (before sleep)
- **Eye patch or moisture chamber** — during sleep or when outdoors
- Consider **ophthalmology referral** if Grade IV–VI (incomplete eye closure)

Step 2: Corticosteroids (FIRST-LINE — Start within 72 hours of onset)

Corticosteroids reduce nerve inflammation and edema, improving recovery rates:

- **Prednisolone 1 mg/kg/day** (maximum 60 mg/day) orally, for **10 days**
    - OR: Prednisolone 60 mg/day × 5 days, then taper by 10 mg/day over 5 days
- **Best outcomes when started within 72 hours** of symptom onset
- Evidence shows corticosteroids significantly improve complete recovery (NNT ≈ 11)

  Contraindications: Uncontrolled diabetes, active peptic ulcer, active systemic infection — reassess benefit/risk individually.

Step 3: Antiviral Therapy (ADJUNCT — Moderate to Severe Palsy)

Antivirals (targeting presumed HSV-1 reactivation) combined with steroids — recommended for **Grade IV–VI**:

- **Acyclovir 400 mg** 5× daily for **10 days**
    - OR: **Valacyclovir 1000 mg** 3× daily for **7 days** (preferred — better bioavailability)
- Evidence: Modest additional benefit over steroids alone in severe palsy (uncertain in mild cases)
- **Do NOT use antivirals alone** without corticosteroids

8. RAMSAY HUNT SYNDROME (Herpes Zoster Oticus)

If vesicles in the ear canal, severe otalgia, or sensorineural hearing loss are present:

- **Prednisolone 1 mg/kg/day** × 7 days + taper
- **Valacyclovir 1000 mg TID × 7 days** (antiviral therapy mandatory — more severe course than Bell's palsy)
- Prognosis is worse than idiopathic Bell's palsy; complete recovery in only ~50%

9. SUMMARY TREATMENT TABLE

Severity (House-Brackmann)	Steroids	Antivirals	Eye Care
Grade I–II (Mild)	Recommended	Optional	Lubricating drops
Grade III (Moderate)	Recommended	Consider	Drops + ointment at night
Grade IV–VI (Severe)	Mandatory	Mandatory (+ steroids)	Drops + ointment + patch/chamber

10. MONITORING AND FOLLOW-UP

Timepoint	Assessment
Day 3–7	Eye assessment, compliance with medications, glucose monitoring (if on steroids)
Week 4	Assess for facial nerve recovery (House-Brackmann grading)
Week 8–12	If no improvement → MRI brain/brainstem with gadolinium; EMG/NCS
Month 3–6	Physio/facial rehabilitation referral if incomplete recovery
>6 months	Consider specialist referral (neurology/ENT/facial nerve surgery)

Daily Monitoring Parameters

- Degree of eye closure (document grade)
- Facial symmetry at rest and during movement
- Blood glucose (if on corticosteroids, especially in diabetics)
- Blood pressure

11. PHYSICAL REHABILITATION

Facial physiotherapy should be initiated early for Grade III and above:

- **Facial nerve exercises** — mimetic muscle retraining
- **Neuromuscular re-education**
- **Biofeedback therapy** — for persistent palsy
- Massage and mirror exercises for self-rehabilitation

12. PROGNOSIS

- ~70–85% of patients with Bell's palsy achieve **complete recovery** without treatment
- With early corticosteroid treatment, recovery rates improve to **>90%**
- Poor prognostic factors: Age >60, complete paralysis (Grade VI), diabetes, no recovery by 3 weeks, Ramsay Hunt syndrome
- Complications of incomplete recovery: synkinesis, crocodile tears (aberrant regeneration), hemifacial spasm, contracture

13. REFERRAL INDICATIONS

Refer to specialist (Neurology / ENT / Ophthalmology) when:

- Central cause suspected (forehead sparing, CNS signs)
- No improvement after 4–6 weeks of treatment
- Grade V–VI with incomplete eye closure threatening corneal integrity
- Bilateral facial palsy
- Ramsay Hunt syndrome
- Evidence of neoplasm or structural lesion

14. REFERENCES

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