Clinical Practice Guideline Summary: Bell’s Palsy

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This month, the American Academy of Otolaryngology—Head and Neck Surgery Foundation (AAO-HNSF) published its latest clinical practice guideline, Bell’s Palsy, as a supplement to Otolaryngology—Head and Neck Surgery. Recommendations developed encourage accurate and efficient diagnosis and treatment and, when applicable, facilitating patient follow-up to address the management of long-term sequelae, or evaluation of new or worsening symptoms not indicative of Bell’s palsy. The guideline was developed using the *a priori* protocol outlined in the AAO-HNS Clinical Practice Guideline Development Manual.1 The complete guideline is available at http://oto.sagepub.com.

To assist in implementing the guideline recommendations, this article summarizes the rationale, purpose, and key action statements. Recommendations in a guideline can be implemented only if they are clear and identifiable. This goal is best achieved by structuring the guideline around a series of key action statements, which are supported by amplifying text and action statement profiles. For ease of reference only the statements and profiles are included in this brief summary. Please refer to the complete guideline for the important information in the amplifying text that further explains the supporting evidence and details of implementation for each key action statement.

For more information about the AAO-HNSF’s other quality knowledge products (clinical practice guidelines and clinical consensus statements), our guideline development methodology, or to submit a topic for future guideline development, please visit http://www.entnet.org/guidelines.

Introduction

Bell’s palsy, named after the Scottish anatomist, Sir Charles Bell, is the most common acute mononeuropathy, or disorder affecting a single nerve, and is the most common diagnosis associated with facial nerve weakness/paralysis.1 Bell’s palsy is a rapid unilateral facial nerve paresis (weakness) or paralysis (complete loss of movement) of unknown cause. The condition leads to the partial or complete inability to voluntarily move facial muscles on the affected side of the face. Although typically self-limited, the facial paresis/paralysis that occurs in Bell’s palsy may cause significant temporary oral incompetence and an inability to close the eyelid, leading to potential eye injury. Additional long-term poor outcomes do occur and can be devastating to the patient. Treatments are generally designed to improve facial function and facilitate recovery.

The myriad treatment options for Bell’s palsy include medical therapy (steroids and antivirals, alone and in combination),2-4 surgical decompression,5-8 and complementary and alternative therapies such as acupuncture. Some controversy exists regarding

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Bell's Palsy

What is Bell’s palsy?

Bell’s palsy is rapid in onset (<72 hours).

How is it treated?

A diagnosis is needed before therapy is considered. 

What if I don’t fully recover?

When does it happen?

Bell’s palsy typically self-limited.

What is the current diagnosis and management of patients with Bell’s palsy?

The guideline development group (GDG) recognizes that Bell’s palsy is a diagnosis of exclusion requiring the careful elimination of other causes of facial paresis or paralysis. Although the literature is silent on the precise definition of what constitutes acute onset in facial paralysis, the GDG accepted the definition of “acute” or “rapid onset” to mean that the occurrence of paresis/paralysis typically progresses to its maximum severity within 72 hours of onset of the paresis/paralysis. This guideline does not focus on facial paresis/paralysis due to neoplasms, trauma, congenital or syndromic problems, specific infectious agents, or post-surgical facial paresis or paralysis; nor does it address recurrent facial paresis/paralysis. For the purposes of this guideline, Bell’s palsy is defined as: Acute unilateral facial nerve paresis or paralysis with onset in less than 72 hours and without an identifiable cause.

Literature cited throughout this guideline often uses the House-Brackmann facial nerve grading scale. This is a commonly used scale designed to systematically quantify facial nerve functional recovery after surgery that puts the facial nerve at risk, but has been used to assess recovery after trauma to the facial nerve, or Bell’s palsy. It was not designed to assess initial facial nerve paresis or paralysis of Bell’s palsy. The House-Brackmann facial nerve grading system is described in Table 1.

While a viral etiology is suspected, the exact mechanism of Bell’s palsy is currently unknown. Facial paresis or paralysis is thought to result from facial nerve inflammation and edema. As the facial nerve travels in a narrow canal within the temporal bone, swelling may lead to nerve compression and result in temporary or persistent weakness.
### Table 1. House-Brackmann Facial Nerve Grading System

<table>
<thead>
<tr>
<th>Grade</th>
<th>Defined by</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Normal</td>
</tr>
<tr>
<td>2</td>
<td>Mild dysfunction</td>
</tr>
<tr>
<td>3</td>
<td>Moderate dysfunction</td>
</tr>
<tr>
<td>4</td>
<td>Moderately severe dysfunction</td>
</tr>
<tr>
<td>5</td>
<td>Severe dysfunction</td>
</tr>
<tr>
<td>6</td>
<td>Total paralysis</td>
</tr>
</tbody>
</table>

permanent nerve damage. The facial nerve carries nerve impulses to muscles of the face, and also to the lacrimal glands, salivary glands, stapedius muscle, taste fibers from the anterior tongue, and general sensory fibers from the tympanic membrane. Accordingly, patients with Bell’s palsy may experience dryness of the eye or mouth, taste disturbance or loss, hyperacusis, and sagging of the eyelid or corner of the mouth.13,18 Ipsilateral pain around the ear or face is not an infrequent presenting symptom.21,22

Numerous diagnostic tests have been used to evaluate patients with acute facial paresis/paralysis for identifiable causes, or aid in predicting long-term outcomes. Many of these tests were considered in the development of this guideline, including:

- Imaging—Computed tomography (CT) or magnetic resonance imaging (MRI)—to identify potential infection, tumor, fractures, or other potential causes for facial nerve involvement;
- Electrodiagnostic testing to stimulate the facial nerve to assess the level of facial nerve insult;
- Serologic studies to test for infectious causes;
- Hearing testing to determine if the cochlear nerve or inner ear has been affected;
- Vestibular testing to determine if the vestibular nerve is involved; and
- Schirmer’s tear testing to measure the eye’s ability to produce tears.

Most patients with Bell’s palsy show some recovery without intervention within two to three weeks after onset of symptoms, and completely recover within three to four months.1 Moreover, even without treatment, facial function is completely restored in nearly 70 percent of Bell’s palsy patients with complete paralysis within six months, and as high as 94 percent of patients with incomplete paralysis; accordingly, as many as 30 percent of patients do not recover completely.23,24 Given the dramatic effect of facial paralysis on patient appearance, quality of life, and psychological well-being, treatment is often initiated in an attempt to decrease the likelihood of incomplete recovery. Corticosteroids and antiviral medications are the most commonly used medical therapies. New trials have explored the benefit of these medications. The benefit of surgical decompression of the facial nerve remains relatively controversial.23,25

There are both short- and long-term sequelae of Bell’s palsy, including an inability to close the eye, drying and corneal ulceration of the eye, and vision loss. These can be prevented with appropriate eye care. The short-term sequelae, such as inability to close the eye and drying of the eye warrant careful management, but treatment results can be favorable. Long-term, the disfigurement of the face due to incomplete recovery of the facial nerve can have devastating effects on psychological well-being and...
quality of life. With diminished facial movement and marked facial asymmetry, patients with facial paralysis can have impaired interpersonal relationships and may experience profound social distress, depression, and social alienation.26 There are a number of rehabilitative procedures to normalize facial appearance, including eyelid weights or springs, muscle transfers and nerve substitutions, static and dynamic facial slings, and botulinum toxin injections to eliminate facial spasm/synkinesis.27-31 This guideline will, however, focus more on the acute management of Bell’s palsy and will not address these interventions in detail.

Purpose

The primary purpose of this guideline is to improve the accuracy of diagnosis for Bell’s palsy, to improve the quality of care and outcomes for Bell’s palsy patients, and to decrease harmful variations in the evaluation and management of Bell’s palsy. This guideline addresses these needs by encouraging accurate and efficient diagnosis and treatment and, when applicable, facilitating patient follow-up to address the management of long-term sequelae, or evaluation of new or worsening symptoms not indicative of Bell’s palsy. The guideline is intended for all clinicians in any setting who are likely to diagnose and manage patients with Bell’s palsy. The target population is inclusive of both adults and children presenting with Bell’s palsy.

This guideline is intended to focus on a limited number of quality improvement opportunities deemed most important by the GDG, and is not intended to be a comprehensive guide for diagnosing and managing Bell’s palsy. The recommendations outlined in this guideline are not intended to represent the standard of care for patient management, nor are the recommendations intended to limit treatment or care provided to individual patients. The guideline is not intended to replace clinical judgment for individualized patient care. Our goal is to create a multidisciplinary guideline with a specific set of focused recommendations based upon an established and transparent process that considers levels of evidence, harm-benefit balance, and expert consensus to resolve gaps in evidence. These specific recommendations are designed to improve quality of care and may be used to develop performance measures.

Key Action Statements

STATEMENT 1. PATIENT HISTORY AND PHYSICAL EXAMINATION:

Clinicians should assess the patient using history and physical examination to exclude identifiable causes of facial paresis or paralysis in patients presenting with acute onset unilateral facial paresis or paralysis. Strong recommendation based on observational studies of alternative causes of facial paralysis and reasoning from first principles, with a preponderance of benefit over harm.

Action Statement Profile

- Aggregate Evidence Quality: Grade C
- Level of confidence in evidence: High
- Benefit: Identification of other causes of facial paresis/paralysis, enabling accurate diagnosis; avoidance of unnecessary testing and treatment; identification of patients for whom other testing or treatment is indicated; opportunity for appropriate patient counseling
- Risks, harms, costs: None
- Value judgments: The GDG felt that assessment of patients cannot be performed without a history and physical examination, and that it would not be possible to find stronger evidence, as studies excluding these steps cannot ethically be performed. Other causes of facial paresis/paralysis may go unidentified; a thorough history and physical examination will help avoid missed diagnoses or diagnostic delay.
- Intentional vagueness: None
- Role of patient preferences: None
- Exceptions: None
- Policy level: Strong recommendation
- Differences of opinion: None

STATEMENT 2. LABORATORY TESTING:

Clinicians should not obtain routine laboratory testing in patients with new onset Bell’s palsy. Recommendation (against) based on observational studies and expert opinion with a preponderance of benefit over harm.

| Table 2. Abbreviations and Definitions of Common Terms |
|---------------------------------|--------------------------------------------------|
| Term                           | Definition                                       |
| Acute                          | Occurring in less than 72 hours                   |
| Bell’s palsy                   | Acute unilateral facial nerve paresis or paralysis with onset in less than 72 hours and without identifiable cause |
| Electromyography (EMG) testing | A test in which a needle electrode is inserted into affected muscles to record both spontaneous depolarizations and the responses to voluntary muscle contraction |
| Electroneuronography (ENoG) testing (neurophysiologic studies) | A test used to examine the integrity of the facial nerve, in which surface electrodes record the electrical depolarization of facial muscles following electrical stimulation of the facial nerve |
| Facial paralysis               | Complete inability to move the face              |
| Facial paresis                 | Incomplete ability to move the face              |
| Idiopathic                     | Without identifiable cause                       |
**STATEMENT 3. DIAGNOSTIC IMAGING:**

Clinicians should not routinely perform diagnostic imaging for patients with new onset Bell’s palsy. *Recommendation (against) based on observational studies with a preponderance of benefit over harm.*

**Action Statement Profile**
- Aggregate evidence quality: Grade C
- Level of confidence in evidence: High
- Benefit: Avoidance of unnecessary radiation exposure, avoidance of incidental findings, avoidance of contrast reactions, cost savings
- Risks, harms, costs: Risk of missing other cause of facial paresis/paralysis
- Benefit-harm assessment: Preponderance of benefit
- Value judgments: None
- Intentional vagueness: The word “routine” was used to indicate there may be some clinical findings that would warrant imaging
- Role of patient preferences: Small, however there is an opportunity for patient education/counseling
- Exceptions: None

**STATEMENT 4. ORAL STEROIDS:**

Clinicians should prescribe oral steroids within 72 hours of symptom onset for Bell’s palsy patients 16 years and older. *Strong recommendation based on high-quality randomized controlled trials with a preponderance of benefit over harm.*

**Action Statement Profile**
- Aggregate evidence quality: Grade A
- Level of confidence in evidence: High
- Benefit: Improvement in facial nerve function, faster recovery
- Risks, harms, costs: Steroid side effects, cost of therapy
- Benefit-harm assessment: Preponderance of benefit
- Value judgments: None
- Intentional vagueness: None
- Role of patient preferences: Small
- Exceptions: Diabetes, morbid obesity, previous steroid intolerance, and psychiatric disorders. Pregnant women should be treated on an individualized basis.
- Policy level: Strong recommendation
- Differences of opinion: None

**STATEMENT 5A. ANTIVIRAL MONOTHERAPY:**

Clinicians should not prescribe oral antiviral therapy alone for patients with new onset Bell’s palsy. *Strong recommendation (against) based on high-quality randomized controlled trials with a preponderance of benefit over harm.*

**Action Statement Profile**
- Aggregate evidence quality: Grade A
- Level of confidence in evidence: High
- Benefit: Avoidance of medication side effects, cost savings
- Risks, harms, costs: None
- Benefit-harm assessment: Preponderance of benefit
- Value judgments: None
- Intentional vagueness: None
- Role of patient preferences: Small
- Exceptions: None
- Policy level: Strong recommendation (against)
- Differences of opinion: None

**STATEMENT 5B. COMBINATION ANTIVIRAL THERAPY:**

Clinicians may offer oral antiviral therapy in addition to oral steroids within 72 hours of symptom onset for patients with Bell’s palsy. *Option based on randomized controlled trials with minor limitations and observational studies with equilibrium of benefit and harm.*

**Action Statement Profile**
- Aggregate evidence quality: Grade B
- Level of confidence in evidence: Medium, because the studies cannot exclude a small effect
- Benefit: Small potential improvement in facial nerve function
- Risks, harms, costs: Treatment side effects, cost of treatment
- Benefit-harm assessment: Equilibrium of benefit and harm
- Value judgments: Although the data were weak, the risks of combination therapy were small
- Intentional vagueness: None
- Role of patient preferences: Large; significant role for shared decision making
- Exceptions: Diabetes, morbid obesity, and previous steroid intolerance. Pregnant women should be treated on an individualized basis.
- Policy level: Option
- Differences of opinion: None

**STATEMENT 6. EYE CARE:**

Clinicians should implement eye protection for Bell’s palsy patients with impaired eye closure. *Strong recommendation based on expert opinion and a strong clinical rationale with a preponderance of benefit over harm.*

**Action Statement Profile**
- Aggregate evidence quality: Grade X
- Level of confidence in evidence: High. Eye protection has been the standard of care, and comparative studies with a no treatment arm are unethical.
- Benefit: Prevention of eye complications
- Risks, harms, costs: Cost of eye protection implementation, potential side effects of eye medication
Benefit-harm assessment: Preponderance of benefit over harm
Value judgments: None
Intentional vagueness: None
Role of patient preferences: Large role for shared decision making, as electrodiagnostic testing may provide only prognostic information for the patient
Exceptions: None
Policy level: Recommendation (against)
Differences of opinion: None

Action Statement Profile
- Aggregate evidence quality: Grade C
- Level of confidence in evidence: Low
due to insufficient number of patients and poor quality of studies. Low confidence in the evidence led to a downgrading of the aggregate evidence quality from C to D.
- Benefit: Improved facial nerve functional recovery
- Risks, harms, costs: Surgical risks and complications, anesthetic risks, direct and indirect costs of surgery
- Benefit-harm assessment: Equilibrium of benefit and harm
- Value judgments: Although the data supporting surgical decompression are not strong, there may be a significant benefit for a small subset of patients who meet eligibility criteria and desire surgical management
- Intentional vagueness: None
- Role of patient preferences: Large. The psychological impact of facial paralysis is significant but varies among patients. Concern about the facial deformity may make some patients willing to pursue a major operation for a small increase in the chance of complete recovery while others may be more willing to accept the chance of poorer outcome to avoid surgery.
- Exceptions: None
- Policy level: Recommendation (against)
- Differences of opinion: None

Action Statement Profile
- Aggregate evidence quality: Grade B
- Level of confidence in evidence: Low, due to significant methodological flaws in available evidence
- Benefit: Acupuncture may provide a potential small improvement in facial nerve function and pain
- Risks, harms, costs: Cost of acupuncture therapy, time required for therapy, therapy side effects, and delay in instituting steroid therapy
- Benefit-harm assessment: Unknown
- Value judgments: Due to the poor quality of the data and the inability to determine harm to benefit ratio, the GDG could not make a recommendation.
- Intentional vagueness: None
- Role of patient preferences: Large
- Exceptions: None
- Policy level: No recommendation
- Differences of opinion: Major. The GDG was divided regarding whether to recommend against acupuncture, or to make no recommendation.

Action Statement Profile
- Aggregate evidence quality: Grade D
- Level of confidence in evidence: Low, due to significant flaws in available evidence
- Benefit: Potential functional and psychological benefit
- Risks, harms, costs: Cost of therapy, time required for therapy
- Benefit-harm assessment: Equilibrium of benefit and harm

STATEMENT 10. PHYSICAL THERAPY:
No recommendation can be made regarding the effect of physical therapy in Bell’s palsy patients. No recommendation based on case series and equilibrium of benefit and harm.
Role of patient preferences: Small
Intentional vagueness: None
Role of patient preferences: Large role
Policy level: No recommendation
Differences of opinion: None

**STANDARD 11. PATIENT FOLLOW-UP:**

Clinicians should reassess or refer to a facial nerve specialist those Bell’s palsy patients with (1) new or worsening neurologic findings at any point, (2) ocular symptoms developing at any point, or (3) incomplete facial recovery three months after initial symptom onset. **Recommendation** based on observational studies with a preponderance of benefit over harm.

**Action Statement Profile**
- Aggregate evidence quality: Grade C
- Level of confidence in evidence: High
- Benefit: Reevaluation for alternate diagnoses of facial paralysis, discussion of therapeutic/reconstructive options, psychological support of patient
- Risks, harms, costs: Cost of visit, time dedicated to visit
- Benefit-harm assessment: Preponderance of benefit over harm
- Value judgments: The GDG sought to address the importance of identifying alternate diagnoses in the absence of recovery, and potential assessment for rehabilitative options. The GDG recognized a lack of established time for patient follow-up; however based on the natural history of Bell’s palsy, the majority of patients will show complete recovery three months after onset.
- Intentional vagueness: There are several specialties that have the expertise to reevaluate these patients; therefore the term “facial nerve specialist” is used to indicate the clinician who could most appropriately assess new or worsening symptoms in these patients.
- Role of patient preferences: Small
- Exceptions: None
- Policy level: Recommendation
- Differences of opinion: None

**Disclaimer**

This clinical practice guideline is provided for informational and educational purposes only. It is not intended as a sole source of guidance in managing Bell’s palsy. Rather, it is designed to assist clinicians by providing an evidence-based framework for decision-making strategies. The guideline is not intended to replace clinical judgment or establish a protocol for all individuals with this condition, and may not provide the only appropriate approach to diagnosing and managing this program of care. As medical knowledge expands and technology advances, clinical indicators and guidelines are promoted as conditional and provisional proposals of what is recommended under specific conditions, but they are not absolute. Guidelines are not mandates and do not and should not purport to be a legal standard of care.

The responsible physician, in light of all the circumstances presented by the individual patient, must determine the appropriate treatment. Adherence to these guidelines will not ensure successful patient outcomes in every situation. The American Academy of Otolaryngology—Head and Neck Surgery Foundation (AAOHNSF) emphasizes that these clinical guidelines should not be deemed to include all proper treatment decisions or methods of care, or to exclude other treatment decisions or methods of care reasonably directed to obtaining the same results. © 2013 American Academy of Otolaryngology—Head and Neck Surgery Foundation. All rights reserved.

**References**


