

# A guide to the assessment and management of patients with Bell's palsy

This leaflet aims to give the key points and some brief details of the more complex issues surrounding the assessment and management of Bell's palsy.

## What is Bell's palsy?

Bell's palsy is a term used to describe a lower motor neurone, unilateral or more rarely a bilateral, sudden onset facial paralysis/paresis. It is the most common cause of acute facial paralysis.



- Bell's palsy accounts for approximately 60 per cent of all cases of sudden onset facial paralysis. It affects from 20 to 40 per 100,000 people per year (which in the UK means between 12,400 and 24,800 people per year). It is difficult to know the exact incidence of Bell's palsy as not all people with the condition are diagnosed or recorded.
- Research suggests that those aged between 15 and 45 have an increased risk of developing the condition. This may be due to the fact that women in the third trimester of pregnancy (the last three months) are at increased risk of developing Bell's palsy. In addition, there appears to be a higher incidence of Bell's palsy in winter.

## What causes Bell's palsy?



Whilst the exact cause of Bell's palsy has not been established, viral aetiology is strongly suspected (Herpes Simplex Virus (HSV)). It has also been linked to other viruses (including the Epstein-Barr virus, Varicella-Zoster virus, Cytomegalovirus, Adenovirus, Influenza virus, Rubella virus, and the Mumps virus), and has also been associated with a depleted immune system and stress.

Bell's palsy can affect anyone of any age at any time.

Bell's palsy is just one of at least 30 other causes of facial paralysis.

## What are the symptoms of Bell's palsy?

Many patients with acute Bell's palsy initially fear they are having a stroke. They can typically be reassured because in Bell's palsy, unlike a stroke, the paralysis affects the entire half of the face. There is no sparing of the forehead and no limb involvement or change in cognition.

- Bell's palsy is a sudden onset of facial weakness or paralysis, usually unilateral in presentation.
- Patients may report ear pain or a period of flu-like illness prior to onset.
- Symptoms peak within 24 – 48 hours.
- In seven out of ten cases, it will slowly disappear over a period of weeks or months.
- In approximately one per cent of cases, both sides of the face are affected.
- Sharp pain in the inner ear or mastoid region may occur during the onset of paralysis.
- Patients may experience impaired or altered sense of taste.
- Sensitivity to loud noise (hyperacusis) may occur.
- A drying of the eye on the affected side, where the eye cannot be closed properly.
- Difficulty with eating, due to loss of control of the lips and mouth on one side; food may get trapped in some areas as a result, and there may be involuntary drooling.
- Difficulty with speaking clearly, particularly with pronouncing particular sounds and letters, such as 'B' and 'P'.

## How is Bell's palsy diagnosed?

The diagnosis of Bell's palsy is a diagnosis of **exclusion**. Assessment of the cranial nerves will establish the pattern of presentation on the affected side. For example, there is typically a wide eye with reduced blink and an inability to close the eye (lagophthalmus) on gentle eye closure; possible ectropion (affected lower eyelid turns outwards away from the eye) in the elderly; loss of movement and expressiveness on the affected side of the face; loss or altered taste often described as "metallic"; altered tear production.

## When is it not Bell's palsy?

Any atypical presentation of facial palsy, which does not fit the pattern outlined above, should lead the clinician to suspect another cause. This includes:

- Slowly progressive (weakness developing over days/weeks and not hours)
- No signs of recovery after 3 months
- Bilateral facial palsy
- Recurrent facial palsy
- Other cranial nerve involvement
- Beware severe facial pain/sensory loss (trigeminal), tongue pain, progressive hearing loss, ataxia, significant unilateral deafness, hoarse voice, dysphagia.

A slowly progressive facial palsy especially that associated with involvement of other cranial nerves, requires a thorough clinical assessment and appropriate investigations (including a contrast-enhanced MRI) to rule out a skull-base tumour. Systemic features may be suggestive of sarcoidosis, Lyme disease, HIV, Lymphoma, TB. Past neurological symptoms may be suggestive of demyelination.

## Bell's palsy in pregnancy



Bell's palsy in pregnancy behaves differently to that in the non-pregnant population. The prognosis for a satisfactory recovery for women who develop a complete facial paralysis with Bell's palsy during pregnancy is significantly worse than that for the general population. Estimated figures for making a satisfactory recovery is 52% compared to 77 – 88% of the non-pregnant population with Bell's palsy (Otolaryngol Head Neck Surg 2002; 126:26-30).

It is therefore important not to neglect the **significant psychological issues** associated with facial palsy which may affect new mothers.

## What are the differential diagnoses?

Bell's palsy must be distinguished from other causes of facial palsy.

PERIPHERAL CAUSES	
<p><b>Lyme disease</b></p> <ul style="list-style-type: none"> <li>• This is more likely if the facial weakness is bilateral</li> <li>• If there is a history of tick exposure/camping holiday etc.</li> <li>• History of arthralgias</li> <li>• Look for a rash</li> </ul> <p>The tests used to help diagnose Lyme disease are:</p> <ul style="list-style-type: none"> <li>- enzyme-linked immunosorbent assay (ELISA) test</li> <li>- Western Blot test</li> </ul>	<p><b>Otitis Media</b></p> <ul style="list-style-type: none"> <li>• Suppurative otitis is excluded by examining the ear</li> <li>• There is gradual onset ear pain, fever, and conductive hearing loss</li> </ul>
<p><b>Ramsay Hunt syndrome</b></p> <ul style="list-style-type: none"> <li>• Herpes zoster may produce an acute facial weakness but is accompanied by a rash within the auricle - geniculate herpes - or on the palate, pharynx, face, neck or trunk.</li> <li>• There may be a pronounced prodrome of pain</li> <li>• Blood tests may confirm the presence of the varicella-zoster virus but they are not usually carried out. One such test is the VZV IgG Antibody Titer.</li> </ul>	<p><b>Sarcoidosis</b></p> <ul style="list-style-type: none"> <li>• Sarcoidosis affecting the parotid gland is suggested by recurrent facial palsy</li> <li>• Facial weakness is often bilateral</li> </ul>
<p><b>Guillain-Barré syndrome</b></p> <ul style="list-style-type: none"> <li>• Facial weakness is often bilateral.</li> <li>• Symptoms are ascending.</li> </ul>	<p><b>HIV infection</b></p> <ul style="list-style-type: none"> <li>• More likely if the facial weakness is bilateral</li> <li>• Look for lymphadenopathy</li> </ul>
<p><b>Tumours</b></p> <ul style="list-style-type: none"> <li>• Vestibular Schwannoma AKA Acoustic Neuroma</li> <li>• Facial Nerve Schwannoma</li> <li>• Cholesteatoma</li> <li>• Parotid Gland Tumour</li> </ul>	

CENTRAL CAUSES	
<p><b>Facioscapulohumeral Muscular Dystrophy (FSHD)</b></p> <ul style="list-style-type: none"> <li>Usually presents in the first and second decades of life but may present at any age. FSHD classically presents with facial and shoulder girdle weakness. Weakness is frequently asymmetrical and can progress slowly to involve selective muscle groups of the body (trunk, arms and legs). Facial weakness is seen in the muscles around the eye (orbicularis oculi), mouth and cheek.</li> </ul>	<p><b>Multiple Sclerosis</b></p> <ul style="list-style-type: none"> <li>Multiple sclerosis should be considered if the palsy is unilateral, in a young adult, is painless, and resolves in 2-3 weeks</li> </ul>
<p><b>Stroke</b></p> <ul style="list-style-type: none"> <li>Differentiate between upper and lower motor neurone lesions of the facial nerve. A lower motor neurone lesion occurs with Bell's palsy, whereas an upper motor neurone lesion is associated with a cerebrovascular accident.</li> <li>A lower motor neurone lesion causes weakness of all the muscles of facial expression, whereas with an upper motor neurone lesion the forehead muscles are not affected.</li> </ul>	<p><b>Tumours</b></p> <ul style="list-style-type: none"> <li>Metastases or primary brain tumours</li> <li>History of cancer</li> <li>Look for mental status changes</li> </ul>

## Where another cause is suspected

- Thorough history and clinical examination
- Full ENT examination, including audiology
- MRI to assess the intracranial and intratemporal facial nerve
- CT scan and/or biopsy in some cases of extracranial pathology
- EMG

Refer the patient for further medical tests:

- MRI with contrast to view IAC
- Audiogram

Refer to Consultant Otologist/ENT Surgeon

## What is the initial treatment for Bell's palsy?

- The best recovery occurs where the duration and severity of nerve compression (inflammation) is minimised. The mainstay of initial treatment to help reduce inflammation on the facial nerve is a long-acting steroid.
- Steroids need to be given **within 72 hours** of the symptoms appearing in order to have any beneficial effects. Where Ramsay Hunt syndrome is suspected, antivirals should also be prescribed.
- Oral prednisolone has been shown to reduce the severity of an attack of Bell's palsy. After 72 hours there is no evidence that steroids are effective in improving recovery.
- Aciclovir is the antiviral drug which is often prescribed for the initial treatment of facial palsy where it is suspected that Ramsay Hunt Syndrome (Herpes Zoster virus) is responsible. Suspicions are raised by a patient experiencing severe pain and presence of a rash on the ear or a sore throat, tongue or palate on the affected side.
- It is important to remember that even treatment with steroids within 72 hours of onset of symptoms will not guarantee a full recovery in all cases. However this treatment will give the best possible chance of making a full recovery.
- The psychosocial aspects of living with facial palsy should not be underestimated, ensure the patient knows how to access further support, for example from Facial Palsy UK.
- Ensure the patient understands that it is normal for recovery to take several weeks and that if a full recovery has not been made within 12 weeks they should seek further medical help.
- Encourage the patient to rest. It's important that they do not try and rush recovery, for example by seeking facial exercise programmes via the internet. To prevent long term complications such as abnormal muscle contractions (synkinesis), physiotherapy should only be carried out under the guidance of an expert after the initial recovery period has passed.
- Ensure the patient understands the importance of eye care, see further information below.

### EYE CARE IS OF PARAMOUNT IMPORTANCE

This should include advice about:

- 1) Frequent instillation of artificial tear drops in the day time (at least every 2 hours) and lubricant ointment (e.g. Lacrilube) at night time.
- 2) Ointment can be used in the day time also, but this can cause blurring of vision.
- 3) If drops are needed more than 4 times a day then they should be PRESERVATIVE-FREE drops. Preservatives used in large quantities or over a prolonged period of time may damage the delicate cells on the surface of the eye or cause inflammation.
- 4) Taping the eye closed at night, ensuring that the eye is fully closed, refer patient to [video](#) on the Facial Palsy UK website. This can be difficult to do if the eyelid skin is greasy from ointment application.
- 5) General advice is to attempt voluntary eyelid closure several times an hour usually by pushing up the lower lid when blinking. Also to wear sunglasses with visors or wraparounds out of doors; to avoid bright sunlight; to avoid/minimise exposure to dry conditions such as air conditioning/central heating/car fan heaters/demisters.
- 6) Corneal exposure with a dry eye problem may be overlooked where excessive watering is a symptom. Patients should understand that with this condition the eye may water excessively as a reflex because it is too dry and this will need careful management to avoid permanent visual loss.

- 7) A patient with a facial palsy who has a poor Bell's phenomenon is at an increased risk for the development of a corneal ulcer. A patient with a loss of corneal sensation is at an even greater risk. Such patients require ocular protection with surgery. They should be seen by an ophthalmologist without delay.

Request our leaflet '**Eye care in patients with facial palsy**' for more detailed information about options for patients with long term complications.



## What is the management for unresolved facial weakness in confirmed cases of Bell's palsy?

Once the diagnosis of Bell's palsy is confirmed then referral to a specialist Facial Palsy Service is the treatment of choice, and may include:

- Therapy to maximise recovery including education and information for patient about how the facial nerve recovers and how to minimise the development of synkinesis.
- Massage; stretches for hypertonic muscles; relaxation and neuromuscular re-education.
- Botulinum Toxin for:
  - ipsilateral synkinesis (a secondary symptom of unresolved Bell's palsy whereby muscles start to move involuntarily, e.g. the eye closes during smiling or eating/drinking.)
  - facial muscle spasms
  - contralateral over activity of the unaffected side (hyperkinesis)
  - neuralgic pain
- Reconstructive surgery (facial reanimation) to assist with eye closure, or to help recreate resting or dynamic symmetry.



## What are the psycho-social issues associated with living with facial palsy?

Loss of confidence	Avoidance of meeting new people
Avoidance of social situations, including eating in public	Reluctance to smile in public and to have photos taken
Reluctance to attend interviews	Reluctance to fulfil work commitment that requires people to give talks/lectures; attend meetings, etc.
Low self-esteem	Loss of identity
Low mood	Depression/Anxiety

## How can you help?

- Recognise that Bell's palsy is not simply a cosmetic issue.
- Understand that there are many functional problems related to facial palsy, (e.g. difficulty eating and drinking; difficulty speaking; difficulty closing the eye/blinking/squinting against the sun).
- Be empathic about the psychological impact of facial palsy regardless of its severity. It is now clearly documented that the degree of weakness or severity of symptoms does not have any direct relationship to how an individual will feel psychologically. Often those with minimal obvious asymmetry will have the most profound psychological difficulties.
- Awareness of Facial Palsy UK and reading this leaflet means that you can direct people to the [Facial Palsy UK website](#) where support groups, which your patient might find helpful to attend, are advertised.
- Consider referral for Physical rehabilitation/Cognitive Behavioural Therapy/Counselling and Mindfulness therapy.

## References:

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Sources: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2714780>

This fact sheet is one of a range of publications produced by Facial Palsy UK.

This information reflects current evidence and best practice but is not intended to replace the medical advice provided by a patient's own doctor or other health professional.

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