Facial palsy

Butler, Daniel P.; Morales, Daniel R.; Johnson, Karen; Nduka, Charles

Published in:
British Journal of General Practice

DOI:
10.3399/bjgp19X706541

Publication date:
2019

Document Version
Peer reviewed version

Title page

Manuscript title: Facial palsy: When and why to refer for specialist care

Authors: Daniel P Butler, MBA, FRCS(Plast)[1]

Daniel R. Morales, BMSc, MBChB, MRCP, MRCGP, PhD[2]

Karen Johnson[3]

Charles Nduka, MA, MD, FRCS(Plast)[4]

Institution:

1 – Department of Plastic and Reconstructive Surgery, Charing Cross Hospital, London, W6 8RF

2 – Division of Population Health and Genomics, University of Dundee, Dundee, DD2 4BF

3 – Facial Palsy UK, Eventus, Sunderland Road, Market Deeping, Peterborough, PE6 8FD

4 – Department of Plastic and Reconstructive Surgery, Queen Victoria Hospital, East Grinstead, RH19 3DZ

Introduction

Facial paralysis causes significant functional and psychological morbidity, including anxiety and depression [1]. The muscles of facial expression play a critical role in protecting the eye, maintaining oral competence, and are essential for portraying emotions to facilitate social interaction. The management of patients with facial palsy can be challenging because there are over 50 aetiologies that can result in facial muscle paralysis and measuring severity is challenging. Facial palsy encountered in primary care can fall into one of three broad groups that help guide the management in both primary and secondary care. These are acute flaccid facial paralysis (AFFP); long-standing flaccid facial paralysis (LFFP) and post-paralytic facial palsy (PPFP) [2]. This article aims to provide guidance on when and why to refer patients with facial palsy to secondary care.

Acute flaccid facial paralysis:

The critical distinction between AFFP and LFFP relates to the presence or absence of viable facial mimetic muscles. The exact time at which the facial muscles become non-receptive to re-innervation remains unknown, however, many would consider 12 months as the point a patient would transfer into the LFFP group [3].

The majority of patients with AFFP will have Bell's palsy [4]. The exact cause of Bell's palsy is unknown, but it is thought to result from facial nerve swelling within the confines of the temporal bone. Eye care with lubricants and night-time taping is essential and, in those presenting within 72 hours, commencing a 10-day course of 50mg prednisolone is the only treatment shown to improve the long-term outcome [4,5]. Amongst those with Bell's palsy, 83% will go on to fully recover facial movement if treated with prednisolone with most showing improvement from three weeks onwards. Only 72% make a full recovery if not treated with steroids within 72hours [5]. The

remainder will have some degree of long-term sequelae and fall into the LFFP or PPFP groups. Table 1 describes the timeframe and indication for referral amongst those with AFFP.

Careful clinical assessment for a painful vesicular rash in or around the ear, mouth or scalp should alert the physician to the diagnosis of Ramsay Hunt Syndrome where the addition of acyclovir to the course of steroids is necessary. Slow onset paralysis, involvement of other nerves (e.g. hearing or taste) should alert the clinician that skull base or parotid tumours are possible causes and warrant prompt investigation.

In those who do not have a complete return of facial movement after 3 months, several non-surgical and surgical treatment options can be provided through specialised facial palsy centres to improve long-term function and appearance. The ultimate objective is to restore movement within the patient's native facial muscles, as transfer of muscles from other areas of the body can never accurately replicate the complex, synchronised movement of the facial mimetic muscles. To achieve this, intervention at around 6 months should be the target in those unlikely to spontaneously recover facial movements.

Long-standing flaccid facial paralysis:

This group consists of those with both congenital and acquired causes of facial palsy persisting more than 12 months. Most will have established an ocular care regimen, but this should be checked at each clinical review. Amongst patients born with facial paralysis, early referral to the local paediatric service is essential to assess for potential causes of the facial palsy. Although unlikely, it should be checked that those with LFFP have undergone investigations to determine its aetiology.

Amongst those with LFFP, there is minimal potential for the patient's native facial muscles to regain meaningful movement. As a result, referral to a specialised facial palsy centre should be made. Here, a multidisciplinary team (MDT) consisting of surgeons, facial physiotherapists and psychologists can plan an optimal treatment strategy. The objectives are to achieve ocular protection, restore nostril opening and restore resting and, where possible, dynamic facial symmetry. A myriad of options exist and it is essential that these patients are given access to review in these specialised MDTs.

Post-paralytic facial palsy:

A potential complication from the spontaneous neural regeneration that occurs following an insult to the facial nerve is PPFP. This typically comprises synkinesis (the development of unwanted facial movements), hypertonia (persistent tightness of the facial muscles), and hyperkinesis (exaggerated movements). All can have a significant impact upon facial symmetry and confer significant psychological morbidity.

As a result, referral to secondary care is indicated. Facial physiotherapy plays an important role in managing these challenging cases and treatment with botulinum toxin to weaken the overactive muscles can carry significant benefit [6]. Surgical options also exist that can be targeted at areas that may benefit from a more permanent solution.

Where to refer:

Currently no standardised referral pathways exist that ensure patients with facial palsy are seen within an appropriate dedicated facial palsy service. A recent patient survey conducted by Facial Palsy UK (FPUK) Charity identified that over 50% of patients with facial palsy referred to secondary care were not sent to a service that was able to manage their case and required subsequent referral onwards [7]. This is likely a result of the patient not being referred to a dedicated facial palsy service. FPUK is in the process of developing a list of recognised facial palsy services across the country to aid primary care physicians in selecting an appropriate location to refer patients onto (www.facialpalsy.org.uk).

Facial palsy services

A comprehensive facial palsy service should comprise facial physiotherapists, psychologists, ENT, ophthalmology and reconstructive surgeons within their core team with additional access to neurology and neurodiagnostic services. Currently the onus is on those working within specialised facial palsy teams to work with local fundholders to better define and establish clear pathways for appropriately referring those with facial palsy to secondary care.

Conclusion:

Although most patients with facial paralysis have Bell's palsy, some will require input from teams specialised in managing those with facial palsy. Timely referral to such facilities can improve the patient's long-term outcome by enhancing the function within the individual's native facial musculature. In those with long-standing facial paralysis, or the sequelae associated with aberrant nerve regeneration, a breadth of treatment options exist that can be tailored to each patient following review within a specialised facial palsy team.

References:

1. Walker DT, Hallam MJ, Ni Mhurchadha S, McCabe P, Nduka C. The psychosocial impact of facial palsy: our experience in one hundred and twenty six patients. Clin Otolaryngol 2012; 37(6): 474-7

2. Jowett N. A general approach to facial palsy. Otolaryngol Clin North Am 2018; 51(6):1019-1031.

3. Gavron JP, Clemis JD. Hypoglossal-facial nerve anastomosis: a review of forty cases caused by facial nerve injuries in the posterior fossa. Laryngoscope 1984; 94(11 Pt 1): 1447–50.

4. Hohman MH, Hadlock TA. Etiology, diagnosis, and management of facial palsy: 2000 patients at a facial nerve center. Laryngoscope 2014; 124(7): e283-93

5. Madhok VB, Gagyor I, Daly F, Somasundara D, Sullivan M, Gammie F, Sullivan F. Corticosteroids for Bell's palsy (idiopathic facial paralysis). Cochrane Database Syst Rev. 2016 Jul 18; 7: CD001942.

6. Husseman J, Mehta RP. Management of synkinesis. Facial Plast Surg. 2008 May;24(2):242-9.

7. Accessing health care for facial palsy via the NHS and the impact of living with the condition. Facial Palsy UK charity patient survey, January 2019. Unpublished.

Tables:

Timeframe	Indication	Rationale	Who to refer to
Immediately	Facial palsy associated with other neurological findings, slow-onset facial palsy (over >3 days), palpable pre-auricular mass, systemic constitutional symptoms, bilateral facial palsy	Alternative aetiology to Bell's palsy likely. Needs early additional investigations.	ENT/neurology depending on distribution of symptoms and signs
Immediately	Persistent dry eye, corneal irritation, corneal ulceration	Requires urgent ophthalmology input to restore corneal protection	Ophthalmology within comprehensive facial palsy service
3 weeks after onset	No improvement in facial movements	Need to exclude alternative aetiology.	Comprehensive facial palsy service (ENT surgery)
3 months after onset	Incomplete resolution of facial palsy	Need to exclude alternative aetiology. May benefit from early surgical and non-surgical interventions to improve short and long-term outcome.	Comprehensive facial palsy service (Plastic surgery)

Table 1. Guidance on when and why to refer patients with acute flaccid facial paralysis.