Approach to the diagnosis of Bell's palsy in primary care setting

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Key points

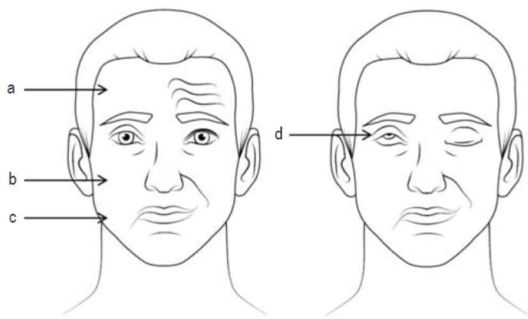
1. Bell's palsy is a clinical diagnosis. Laboratory testing and imaging is not essential.
2. Short course of high dose corticosteroids for 10 days is the recommended treatment and should be started within 72 hours from onset. Antiviral therapy is optional.
3. Recovery will usually be noticed within 2 to 3 weeks after onset of symptoms. Alternative diagnosis should be considered in case of incomplete recovery after 3 to 4 months.

History

1. The acute onset of symptoms is a cardinal feature of Bell's palsy. The rate of symptom onset must be confirmed by history in order to make the diagnosis: facial weakness should reach its peak within 72 hours.
2. The sudden onset of unilateral facial weakness and the absence of symptoms/signs indicative of another underlying cause allow for the diagnosis of Bell's palsy.
3. Additional symptoms of Bell's palsy may include pain in the ear and post-auricular region, alteration of taste, numbness or tingling of the cheek/mouth, ocular pain and tearing.
4. Features suggestive of alternative diagnosis:
    a. Severe pain
    b. Gradual in onset
    c. Additional features e.g. diplopia, headache, swallowing difficulty, tinnitus, dizziness, hearing loss (except hyperacusis)
    d. Bilateral facial weakness
    e. Recent trauma

Physical Examination

Neurological examination
1. Examination to confirm unilateral facial weakness (see Figure):
    a. lack of wrinkling of the forehead
    b. incomplete lid closure or failure to resist passive opening of eye forcefully
    c. hanging corner of the mouth, and a flattened nasolabial fold
    d. Inability to blow the cheek
2. The consideration of stroke as a cause of facial palsy is important with this being the main concern for many patients and clinicians. Central cause of facial palsy (i.e. upper motor neuron lesion of facial weakness) must be excluded by the involvement of the muscles of the forehead (frontalis contraction).(see Figure)
3. It is important to determine whether any additional neurological deficits are present that are not due to facial nerve dysfunction e.g. nystagmus, extra-ocular movement paralysis, limb weakness, or ataxia. It will point to alternative diagnosis/location of lesion.



Extracted from Heckmann JG, et al: The diagnosis and treatment of idiopathic facial paresis (Bell's palsy). Dtsch Arztebl Int 2019;116:692–702

Figure: a) lack of wrinkling of the forehead (such deficit is NOT present in central cause of facial palsy) ; b) flattened nasolabial fold; c) drooping corner of mouth; d) impaired eye closure when the patient is asked to close the eyes.

General examination

1. Careful inspection of ear and external auditory canal (including otoscopy) for any vesicular lesions (Ramsay Hunt syndrome, caused by herpes zoster virus).
2. Careful examination of parotid gland, and skin of the head, face and cheek is essential in order to look any mass or ulceration suspicious of malignancy.

Investigation

1. Laboratory testing is not indicated when history and physical examination do not suggest an alternative cause.
2. Diagnostic imaging is not necessary at the time of initial presentation to support the clinical diagnosis of Bell's palsy.
3. Imaging is recommended if an alternative cause is suspected, e.g. history of trauma to the temporal bone, or history of tumor, or if the paralysis fails to recover within the expected time frame, or worsens, or development of new neurological signs.

Treatment

1. After the clinical diagnosis of Bell's palsy is made, steroid therapy should be initiated within 72 hours from symptoms onset.
2. The regimen can be either one of the following (according to the randomized controlled studies):
    a. Prednisolone 25mg two times per day (i.e. BD) for 10 days
    b. Prednisolone 60mg daily for 5 days, then tapered by 10mg each day for 5 days.
3. Addition of antiviral agent (acyclovir 400mg five times per day for 10 days OR valaciclovir 1gm three times per day for 7 days) is not proven to have additional benefit in randomized controlled studies. However, given the potential of a small benefit in facial nerve functional recovery and the relatively low risk of antiviral therapy, patients may be offered combination therapy if treated within 72 hours of symptom onset, especially in those patients with severe palsy upon presentation.
4. Eye protection advice should be offered in patients with incomplete eye closure:
    a. Artificial tears during the day time
    b. Topical ointment at night
    c. Taped closure at night
    d. Avoid exposure to dusty and windy environments

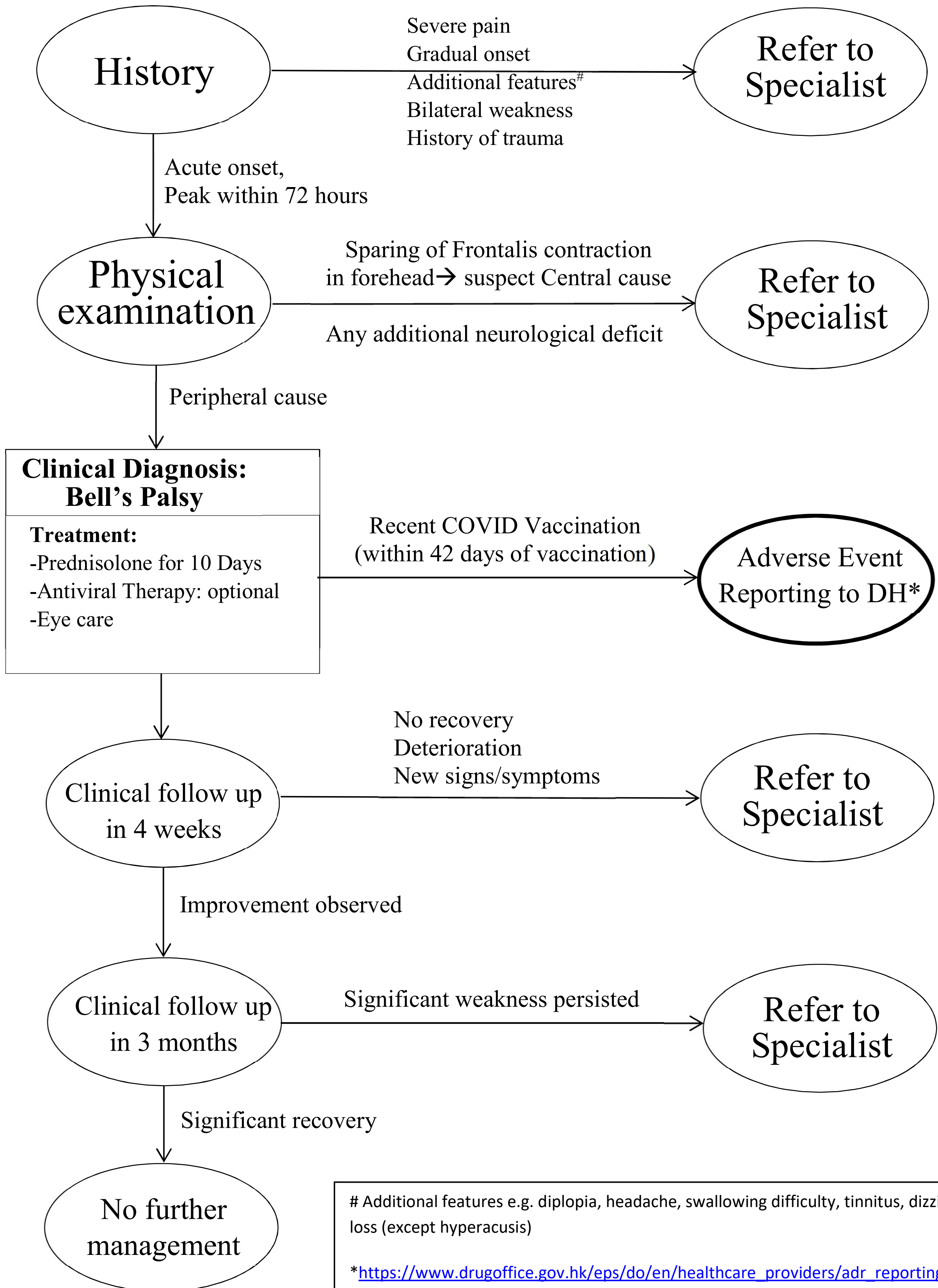
Referral/Reporting

1. Bell's palsy can be managed in outpatient setting with steroid therapy initiated and follow up arranged for monitoring of recovery.
2. Referral to neurologists is indicated if alternative diagnosis is suspected. In case of acute facial nerve palsy with sparing of the frontalis muscle, suspicious of acute stroke, is noticed, urgent referral to A&E is recommended.
3. When Bell's palsy is suspected or diagnosed after COVID-19 vaccination, especially within 42 days, reporting to Department of Health as AEFI is indicated. It can be reported via the DH website: https://www.drugoffice.gov.hk/eps/do/en/healthcare_providers/adr_reporting/index.html

Follow up

1. Follow up to monitor for recovery in 4 weeks' time from symptom onset. Around 85% of patients will experience some recovery in the first 3 weeks. So evidence of recovery will give reassurance on the diagnosis of Bell's palsy. However, in case of absence of any recovery or evidence of deterioration or development of new symptoms/signs, referral to specialist is needed.
2. Further review at 3 months from symptom onset. > 80% of patients with Bell's palsy after steroid therapy and > 60% of patients without steroid therapy recovered completely in 3 months. If significant facial weakness remained, referral to specialist can be considered for re-evaluation as well as treatment planning for residual facial weakness as well as complication e.g. synkinesis or autonomic disturbances (crocodile tears).
3. Advice patients to avoid further exposure to possible precipitating factors where applicable.

Primary Care Management and Referral Algorithm



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References

1. Eviston TJ, Croxson GR, Kennedy PG, et al. Bell's palsy: aetiology, clinical features and multidisciplinary care. J Neurol Neurosurg Psychiatry. 2015;86(12):1356-1361.
2. Peitersen E. Bell's palsy: the spontaneous course of 2,500 peripheral facial nerve palsies of different etiologies. Acta Otolaryngol Suppl. 2002;(549):4-30.
3. Sullivan FM, Swan IR, Donnan PT, et al. Early treatment with prednisolone or acyclovir in Bell's palsy. N Engl J Med. 2007;357(16):1598-1607.
4. Engström M, Berg T, Stjernquist-Desatnik A, et al. Prednisolone and valaciclovir in Bell's palsy: a randomised, double-blind, placebo-controlled, multicentre trial. Lancet Neurol. 2008;7(11):993-1000.
5. Baugh RF, Basura GJ, Ishii LE, et al. Clinical practice guideline: Bell's palsy. Otolaryngol Head Neck Surg. 2013;149(3 Suppl):S1-S27.
6. Heckmann JG, Urban PP, Pitz S, et al. The Diagnosis and Treatment of Idiopathic Facial Paresis (Bell's Palsy). Dtsch Arztebl Int. 2019;116(41):692-702.