Facial Nerve Palsy

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Signature of ratifying Group Chair	John Pappachan Chair of Children's Services Review Group
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Relevant national or international Guidance eg NICE, SIGN, BTS, BSPED	
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Is this document to be published in any other format?	

Does this document replace or revise an existing document? If so please identify here which document/s

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1.1 Introduction

Facial nerve palsy occurs in around 25 children per 100,000 per year (1). Bell's Palsy (idiopathic facial nerve) palsy occurs in 1 in 60 people in their lifetime and is a diagnosis of exclusion.

The proximity of the New Forest increases the prevalence of Lyme's disease in this region. The prevalence of Lyme disease has a bimodal distribution with peaks at 5-9 years and 45-59 years (2).

A 5-year service evaluation conducted at University Hospital Southampton found 42.5% of Lyme serology tests were positive in children presenting with facial nerve palsy (3).

The peak in the paediatric age group and high local prevalence has implications for the appropriate management of the facial nerve palsy locally and greater consideration has to be given to Lymes disease as an underlying cause of facial nerve palsy.

The 5-year service evaluation at Southampton noted significant variation in management and this guideline hopes to address this issue and provide a guide for standardised management across the region. (3)

1.2 Scope

This guideline applies to all patients under the age of 18 years presenting with facial nerve palsy.

This guideline is limited to the paediatric population of Wessex due to the prevalence of Lyme's disease in the New Forest, which can present as facial weakness and can be effectively treated with appropriate antibiotics.

1.3 Purpose

As a condition Facial Nerve Palsy is often idiopathic or secondary to Lymes disease and, in these cases, associated with a very good prognosis.

Therefore, this guideline aims to ensure management of paediatric facial nerve palsy is as consistent as possible with appropriate supportive treatments e.g. eye-care initiated. It also aims to ensure that more sinister diagnoses are not overlooked, treatable aetiologies are promptly identified and managed.

1.4 Definitions

Bell's palsy – Also known as idiopathic facial nerve palsy, this refers to a lower motor neurone facial weaknesses of no clear structural cause, i.e. is a diagnosis of exclusion.

2 Recommendations

2.1 Pathogenesis

Facial nerve palsy is an acute, unilateral, idiopathic paralysis of the face in a lower motor neurone pattern. In this region Lyme disease should be high on the list of differential causes, the pathogenesis has been postulated to involve direct infiltration and nerve damage by the bacterium (4).

Other causes identified in a USA study include herpes zoster virus (4%), varicella (6%), acute otitis media 12%) and coxsackie virus (2%) (5). It is important to consider malignancy and this has been identified as a cause of facial paralysis in up to 12% of cases (5). Idiopathic facial nerve palsy is a diagnosis of exclusion and prevalence varies between 9-50% of paediatric cases (5).

2.2 Diagnosis

History:

Thorough history to include: onset and progression of facial palsy. Commonly unilateral facial weakness is observed and occurs acutely. Forehead sparing should NOT occur as this suggests upper motor neurone pathology and therefore a central cause.

Less commonly: mild pain in or behind ear, facial numbness, hearing impairment or hyperacusis, disturbed taste, dry eyes.

Any recent infections, tic exposure or bites or history of trauma.
Ask about pain, weight loss or any other systemic symptoms.

Examination:

Thorough examination including faces, eyes, ENT, cranial nerves, peripheral nervous system, joints and skin. Remember to check a BP.

Ensure there are no ‘red flag’ features on history or examination.

Red flags:

Forehead sparing (i.e. UMN lesion) or other abnormal neurology	Neurological examination should be otherwise entirely normal in Bell’s palsy. Look for signs of intracranial lesion. Loss of corneal reflex may indicate a very proximal lesion.
Middle ear infection, effusion, hearing loss, vertigo, ear discharge	Look for vesicles – Ramsey-Hunt syndrome Grommet may be indicated in children with otitis media and facial palsy – refer to ENT Consider more serious ENT pathology such as cholesteatoma - discuss with ENT
Parotid mass	
Bilateral Palsy	Consider Guillain Barre or multiple sclerosis.
Severe Pain	Consider Ramsay Hunt syndrome and herpes zoster infection. Vesicles not always present but pain is a feature.
Bruising or organomegaly	Consider oncological diagnoses
Hypertension	Can cause facial palsy and has been a presenting feature of coarctation of the aorta in case reports

2.3 Investigations

FBC and film
Lyme Serology

Consider: CT or MRI if any red flag or atypical features.

2.4 Management

1. Eye care – Hypromellose/Lacri-lube +/- tape at night if incomplete eye closure

2. **Antibiotics** – Amoxicillin orally for 14 days. 15-20mg /kg (max 500mg) three times a day.

If penicillin allergy and under 12 years old – Azithromycin 10mg/kg (max 500mg) once a day for 3 consecutive days, then repeated for 3 consecutive days in week 2.

If penicillin allergic and 12 years old and above – Doxycycline 100mg twice daily for 14 days .

3. Consider Steroids - Prednisolone 1mg/kg (40mg maximum) for 10 days *if patients presents within 72 hours of symptom onset*. No need to wean. Literature review (10) shows that corticosteroids are 'the drug of choice' in treatment of adults with Bell's Palsy.

4. Antivirals – Cochrane review showed 'no significant benefit' of antivirals compared with placebo in producing complete recovery from Bell's palsy. Further evidence showed that antivirals were significantly less likely than corticosteroids to produce complete recovery. (9, 10).

2.5 Referrals

Ophthalmology - Clinically indicated if eye is not fully closing at night.

ENT – consider if red flags or particular concerns. If acute otitis media present discuss with ENT. If any ear symptoms and < 2.5 years – refer to ENT.

Neurology – consider if focal or evolving neurological signs or any other cause for concern.

Physiotherapy – not indicated at diagnosis as most resolve. However if still present at 6 week outpatient follow up, referral to Wessex facial nerve palsy services could be considered. See following link for referral form:

http://www.uhs.nhs.uk/OurServices/Brainspineandneuromuscular/TheWessexFacialNerveCentre/ForhealthprofessionalsWhentoreferpatientswithfacialparalysis.aspx

Speech & Language Therapy – consider if difficulties with swallow or communication.

2.6 Follow up & prognosis:

1. Ensure Lymes serology and other results will be chased up in a timely fashion. If Lymes serology is negative – contact patient/ family to stop antibiotics.

2. Ward review within **7 days** to ensure no deterioration. The symptoms should be stable within a few days. If not, consider an enlarging lesion or alternative diagnosis. At this point, stop antibiotics if Lyme serology is negative and this has not already been done.

3. Outpatient clinic appointment within **6 weeks** to review progress.

4. **Subsequent review** is subject to the patient's level of recovery.

Prognosis is very good with resolution in the majority of children with complete resolution in 2 months in many children and by 6 months in the majority (7,8, 11).

If no recovery at 3 weeks, then alternative diagnoses must be considered.

3 Implementation

Training and dissemination via the Wessex Neurology Network, the Paediatric ED group and the PIER website.

4 Process for Monitoring Effectiveness

Effectiveness and adherence to the guideline will be monitored by regional audit of practice and ED group audits.

5 References

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9 Appendices

Appendix A Paediatric Regional Guideline Consultation Documentation:

Appendix B Procedures, patient information leaflets, audit forms

Appendix A

Paediatric Regional Guideline Consultation Documentation:

Trust	Name of person consulted* (print)	Designation of signatory[$]	Signature
Chichester	Circulated with no comments		
Dorchester	Circulated with no comments		
Hampshire Hospitals Foundation Trust	Circulated with no comments		
Poole	Circulated with no comments		
Portsmouth	Dr Warriner Dr Freeman		
Salisbury	Circulated with no comments		
Southampton	Mr Tim Mitchell (ENT UHS) Miss Andrea Burgess (ENT UHS) Miss H Ismail Koch (ENT UHS) Miss Kristina May (Opthalmology UHS) Dr Andrea Whitney (Neurology UHS)		
IOW	Circulated with no comments		

* this person agrees they have read the guidelines, consulted with relevant colleagues and members of MDT, managers and patients, young people & their families as appropriate. Any queries raised during consultation and review process should be documented with responses and any changes made to guideline.

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