Worcestershire Acute Hospitals NHS Trust

Guideline for Therapy Intervention for Ulnar nerve Lesions and Neurapraxia

This guidance does not override the individual responsibility of health professionals to make appropriate decision according to the circumstances of the individual patient in consultation with the patient and /or carer. Health care professionals must be prepared to justify any deviation from this guidance.

Introduction

This guideline covers the post operative care and rehabilitation of patients that had a repair of the distal ulnar nerve and attending therapy departments in Worcestershire and Herefordshire.

It also covers the care of any patients who experience neurapraxia of the ulnar nerve.

This guideline is for use by the following staff groups :

Therapists who have undertaken a period of supervised practice in this field within the previous 2 years. Supervising/senior therapists to work towards British Association of Hand Therapists (BAHT accredited training at Level II in Elective, Trauma and Hand Therapy).

Lead Clinician(s)

An Van Hyfte	Clinical specialist OT
Guideline reviewed and approved by Hand Therapy Clinical Governance meeting on:	23rd May 2019
This is the most current document and is to be used until a revised version is available:	23rd May 2021

Key amendments to this guideline

Date	Amendment	By:
Feb 2010	Guideline approved by Hand Therapy Clinical Governance Committee	
14.12.2011	Amendments made to guidelines Lay-out	An Van Hyfte
13.02.2014	Guideline reviewed with no amendments made to content	Hand Therapy Clinical Governance meeting
25.02.2016	Document approved with no changes	
05.12.2017	Sentence added in at the request of the Coroner	
18.12.2017	Document extended for 3 months as per TLG recommendation	TLG
March 2018	Document extended for 3 months as approved by TLG	TLG
7th March 2018	Guideline reviewed and re-approved by the Therapy Hands Clinical Governance Group	Alison Hinton
May 19	Documents reviewed. Minor amendments to specify conservative and post-operative management and to make lay-out more uniform with other guidelines.	An Van Hyfte

Guideline for Therapy Intervention for Ulnar nerve Repair and Neurapraxia

Introduction

This guideline covers the post operative care and rehabilitation of patients that had a repair of the distal ulnar nerve and attending therapy departments in Worcestershire and Herefordshire.

It also covers the care of any patients who experience neurapraxia of the ulnar nerve. The ulnar nerve is often damaged in association with flexor tendons. When associated with flexor tendon repairs, the guideline for flexor tendon repairs should be followed.

Competencies required

- Therapists who have undertaken a period of supervised practice in this field within the previous 2 years.
- Supervising/senior therapists to work towards British Association of Hand Therapists (BAHT accredited training at Level II in Elective, Trauma and Hand Therapy).

Patients covered

- Patients with damage to the ulnar that will be managed conservatively.
- The acute stage of this guideline covers patients with an ulnar nerve lesion not associated with flexor tendon repair.
- Any patient able to comply with the therapy regime following a repair to the ulnar nerve.

Details of Guideline

i) For patients with a neuropraxia:

Carry out a functional and sensory assessment of the hand. The following deficits can be expected:

- Clawing of little and ring
- Loss of arches of the hand and wastage of hypothenar eminence
- Loss of thumb adductor
- Wastage of the web spaces
- At forearm level there will also be a weak wrist flexion and loss of ulnar deviation of the wrist. The clawing may be less if the laceration is at elbow level.
- *Functional loss:*
  Decreased power in all grips
  Loss of writing grip due to loss of thumb adduction
  Inability to adduct and abduct the digits
- *Sensory loss:* hypothenar eminence, volar ring and little. At elbow level the dorsal ulnar surface of the hand will be affected.

Refer to week 6 onwards in this document for splinting suggestions and treatment considerations.

ii) Post-surgery intervention:

Time	Intervention
Acute stage (week 1-3)	Post surgery: Immobilisation of the wrist in neutral and MCP joints of ring and little in 70° flexion. **Splinting:** In order to allow flexion of digits, the surgical backslab should be replaced by a thermoplastic forearm based dorsal blocking splint positioned as per theatre instructions. Continuous splinting is required for 3 weeks unless the consultant states otherwise. **Exercise:** Active assisted ROM of digits only, wrist immobilised **Oedema management:** Patient is advised to position the forearm in elevation when sitting/sleeping using pillows. **Advice:** Patient is advised not to use the affected hand for any activity i.e. work/ driving/lifting/housework Patient is advised to maintain range of movement on elbow/shoulder regularly.
Week 3-6	**Splinting:** Continue splinting at night time and in 'at risk situations' **Exercises:** Active ROM of wrist can be introduced. Introduce nerve gliding exercises, avoid tension on the ulnar nerve. Make sure that the repaired nerve is not put in end position. **Scar management:** To commence once the wound is closed (with no signs of infection). Scar massage is introduced using a non perfumed moisturiser (E45 or aqueous cream)Patients are taught to use circular motions along the scar working distal to proximal to help the reduction of oedema.
Week 6-8	Carry out a functional and sensory assessment of the hand. Deficits that can be expected: refer to 'patients with neurapraxia' above. **Splinting suggestions:** *Night*: splint in POSI to decrease the likelihood of fixed claw deformity. *Day*: an anti-claw splint to little and ring: dorsal hand based blocking splint to prevent hyperextension of the MCP joints but allow full flexion. **Exercises** Gentle passive ROM of wrist and digits can be introduced. (If flexor tendons are associated passive extension should be delayed until 12

	weeks post surgery!)
Considerations	**Desensitisation/ sensory re-education** Begin with localisation of moving touch using light and deep pressures over the involved area. When moving touch is perceived upgrade to recognizing of shapes (starting with large objects and moving on to smaller objects) and discriminative sensation of different textures. **Advise** Reinforce importance of protection of the ulnar side of the hand from harm by sharp or hot objects

Monitoring Tool

STANDARDS	%	Clinical Exceptions
All patients who have had an ulnar nerve lesion/ neurapraxia	100	Patients who are unable to safely follow the regime instructions e.g. those with cognitive impairment. Their treatment will be discussed on an individual basis with their consultant.

How will monitoring be carried out?	Continuous
When will monitoring be carried out?	As treatment occurs
Who will monitor compliance with the guideline?	Clinical Specialist physio/OT in Rheumatology/Hand trauma

References

- **Occupational Therapy splinting and hand therapy procedure**. WAHNHST (2000); Elliott J.
- **Occupational Therapy Risk Assessment COSSH**; WAHNHST (1999). Elliott J.
- Selly Oak Hospital Birmingham: Hand Protocols
- Queen Victoria Hospital NHS Trust, Hand Therapy Protocols
- Derby Royal Infirmary, Hand Therapy guidelines
- Frenchay Hand Centre, Bristol, Hand Therapy Guidelines
- Hereford NHS Trust, Hand Therapy Guidelines.
- Brigham and Women's hospital, hand therapy guidelines.
- **Hand Therapy Protocols Alexandra Hospital/Worcester Royal Hospitals;** WAHNHST (2002) Worcestershire Hand Therapies Group

- **Hand Therapy Principles and Practice** Butterworth Heinemann – Salter M, Cheshire L Chapter 12 Splinting the Hand (2000)

- **Rehabilitation of the Hand: Surgery and Therapy Forth Edition** Mosby (1995) Hunter James, MD; Mackin Evelyn, PT; and Callahan Anne, MS-OTR/LCHT

Contribution List

Key individuals involved in developing the document

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Supporting Document 1 - Equality Impact Assessment Tool

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

		Yes/No	Comments
1.	**Does the policy/guidance affect one group less or more favourably than another on the basis of:**		
	• Age	no	
	• Disability	no	
	• Gender reassignment	no	
	• Marriage and civil partnership	no	
	• Pregnancy and maternity	No	
	• Religion or belief	No	
	• Sex	No	
	• Sexual orientation	No	
2.	**Is there any evidence that some groups are affected differently?**	No	
3.	**If you have identified potential discrimination, are any exceptions valid, legal and/or justifiable?**	n/a	
4.	**Is the impact of the policy/guidance likely to be negative?**	n/a	
5.	**If so can the impact be avoided?**	n/a	
6.	**What alternatives are there to achieving the policy/guidance without the impact?**	n/a	
7.	**Can we reduce the impact by taking different action?**	n/a	

If you have identified a potential discriminatory impact of this key document, please refer it to Human Resources, together with any suggestions as to the action required to avoid/reduce this impact.

For advice in respect of answering the above questions, please contact Human Resources.

Supporting Document 2 – Financial Impact Assessment

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

	Title of document:	Yes/No
1.	Does the implementation of this document require any additional Capital resources	No
2.	Does the implementation of this document require additional revenue	No
3.	Does the implementation of this document require additional manpower	No
4.	Does the implementation of this document release any manpower costs through a change in practice	No
5.	Are there additional staff training costs associated with implementing this document which cannot be delivered through current training programmes or allocated training times for staff	No
	Other comments:	

If the response to any of the above is yes, please complete a business case and which is signed by your Finance Manager and Directorate Manager for consideration by the Accountable Director before progressing to the relevant committee for approval