Rehabilitation Guidelines for Patients Undergoing Cervical Surgery

Date Approved: 25/01/18

Ratifying Body: Drug and Therapeutic Committee

Related Documents:
- Rehabilitation guidelines for cervical anterior fusion
- Rehabilitation guidelines for cervical decompression

Author: Helen Nafis

Owner (Executive Director): Aresh Nejad

Directorate: Clinical

Superseded Documents:
- Cx posterior decompression, cx fusion and cx anterior fusion

Subject:
- (discectomy/corpectomy/arthroplasty/laminectomy/foramenotomy), anterior cervical decompression +/- fusion, cervical artificial disc, posterior cervical decompression +/- fusion

Review Date: 1st January 2023

Keywords and Phrases:
- Surgery, post op*, physi*, outcome, 2013-current

External References:
- e.g. NHSLA

Consultation Group/Approving Bodies:
- RNOH Spinal surgeons

Readership:
- Clinical staff only

CQC Outcomes:
- Outcome 1: Respecting and involving people who use services
- Outcome 4: Care and welfare of people who use services
- Outcome 6: Cooperating with other providers
- Outcome 16: Assessing and monitoring the quality of service provision
NHSLA General Standards

4.1 Patient information & consent
4.2 Patient information
4.4 Screening Procedures
4.7 Physical assessment & examination of patients
4.14 Transfer of patients
4.15 Discharge of patients
5.6 Analysis
5.7 Improvement
5.8 Best practice - NICE
# Table of Contents

1. Introductions and aims of guideline ................................................................. 4  
2. Body of guideline .................................................................................................. 4  
3. Monitoring and the effectiveness of this guideline .............................................. 9  

Appendix 1: Glossary of terms ............................................................................... 10  
Appendix 2: Other linked trust policies and guidelines .......................................... 101  
Appendix 3: Extra sources of information and support .......................................... 101  
Appendix 4: Privacy impact assessment and equality analysis ............................ 123
1. Introductions and aims of guideline

Please note that this is advisory information only. Your experiences may differ from those described. All exercises must be demonstrated to a patient by a fully qualified physiotherapist. We cannot be held liable for the outcome of you undertaking any of the exercises shown here independently of direct supervision from the RNOH. As a specialist orthopaedic hospital we recognise that our broad and often complex patient group needs an individualised rehabilitation approach. This takes into consideration the multi-factorial components contributing to neck pain. These are milestone driven guidelines designed to provide an equitable rehabilitation service to all our patients. They will also limit unnecessary visits to the outpatient clinic at RNOH by helping the patient and therapist to identify when specialist review is required.

2. Body of guideline

**Indications:**
- Neck pain with arm pain
- Arm weakness
- Cord symptoms (myelopathy: spastic gait / numbness and clumsiness in hands)
- Headaches

**Possible complications of surgery:**
- Infection
- Dural tear
- Nerve/spinal cord damage
- Ongoing pain
- Speech/ swallowing problems- usually temporary (anterior procedures)
- Worsening of existing myelopathy or radiculopathy
- Wound Haematoma
- Segmental instability/ subsidence at level of surgery or adjacent segments

**Expected outcome:**
- Patient reports good relief of arm pain and significant decrease in neck pain.
- Improvements can continue for up to 18 months post-operatively.

**Pre-operatively**

Occasionally, if deemed clinically appropriate, the patient will be seen pre-operatively to assess the following, as indicated:
Rehabilitation Guidelines for Patients Undergoing Cervical Surgery. Page 4

• Current functional level
• General health
• Social/ work/ hobbies
• Posture
• Functional range of movement.
• Neurological function
• Post- op expectations and precautions.

Post- operatively

Always check the operation notes and post- operation instructions. Discuss any deviation from routine guidelines with team concerned.

May require collar if documented (however very rare).

On discharge
Patients will be referred for outpatient physiotherapy to begin at 6 weeks. Patients are usually referred by the inpatient physiotherapist, unless the consultant specifies no excessive movement until they are happy that fusion has taken place at their clinic review at 6 weeks.

Initial Rehabilitation: Phase 0-6 weeks

Goals:
1. Mobilise safely and independently
2. Ensure understanding of good posture
3. Achieve full shoulder ROM
4. During this phase gentle functional neck movements
5. Advise patient regarding pacing and discuss expectations
6. Return to driving at 4-6 weeks (as per precautions below)
7. Proprioception: upper limbs and lower limbs
8. Deep neck flexor activation
9. Return to work at 4-6 weeks
10. Ensure understanding of use of collar and length of time to be worn (very rarely requested by consultant)

Precautions
1. Pacing; during the first 4-6 weeks whilst the initial post operative pain settles and tissue begins to heal, it is advised to be careful with some activities. It is important to gradually increase activities and also pace activities throughout the day dependent on pain. Current evidence supports a steady paced up increase in activity whilst respecting post operative soreness, healing times, nerve recovery times, neural sensitivity and patient’s previous level of fitness.
2. Avoid driving; until approximately 6 weeks post-operatively or longer if required. It is important that the patient can sit comfortably in the car, turn their

Rehabilitation Guidelines for Patients Undergoing Cervical Surgery. Page 5

Date Approved 25/01/2018
Version 1.0
neck as required for driving and be able to carry out an emergency stop without hesitation.

3. **For the first 6 weeks lift nothing heavier than 1kg (or ½ full kettle);** slowly increase and pace up lifting load overtime, dependent on pain, as appropriate.

4. **Walking;** no restrictions, should be increased gradually each day.

5. **Sitting;** should be in a supportive chair.

6. **Sleeping;** we recommend no more than 2 pillows when sleeping and advice on neutral cervical spine position.

7. **Avoid excessive neck movements;** we advise not to hyperextend/hyperflex at the neck ie. no washing hair over a bath/hairdressers

---

**Treatment**

**Pain relief:**
Ensure adequate analgesia and positioning
Use of modalities as appropriate

**Patient education:**
Advise patient on pacing and activities
Advise patient on posture and movement and ergonomic correction
Reinforce importance of lifting no load heavier than 1kg
Expectations of treatment and recovery time
Scar management

**Exercises:**
Core stability activation; lumbar and cervical
Encourage normal functional movement
Proprioception – UL & LL
Kinetic chain

**Mobility:**
Ensure patient can manage transfers and mobilise independently taking into account pre operative mobility.

**MDT:**
Referral onwards as necessary to appropriate service ie; OT, psychology, orthotics.

**Milestones to progress to next rehab phase:**

1. Adequate pain relief
2. Achieving goals as above
3. Managing normal activities and gradually increasing
4. Basic good postural stability
5. Attain functional neck movement
Recovery/rehabilitation: Phase 6 weeks - 6 months

Goals

1. Increase normal activity and function
2. Return to work at 4-6 weeks (unless heavy manual work—aim to return at 3 months with a phased return)
3. Graded return to sport/ gym
4. Increase lifting
5. Regain functional cervical spine movement
6. Regain normal glenohumeral and scapular ROM and dynamics
7. Address any fear avoidance behaviour/lack of confidence

Precautions/Restrictions

1. Return to work approximately 4-6 weeks.
   a. Phased as appropriate for job role (ie driving, travelling or computer based).
   b. Heavy manual work should be phased in from 3 months
2. Avoid lifting anything heavier than 10kg until 3 months post-operatively or until the surgeon advises.
3. Light upper limb resistance exercises
4. Rowing and increasing upper body weights from 3-6 months as control allows
5. No breast stroke or front crawl until 6 months
6. Running not usually allowed until fusion confirmed at about 3-6 months. Discussion with surgical team may be necessary.
7. No contact sports until 6-9 months: to be discussed at 6 month review with surgical team.

Treatment

Pain relief
Ensure adequate pain relief coincides with appropriate level of exercise and activity

Patient education
Ensure patient is pacing at appropriate level and is not over or under exercising
Ensure good knowledge of importance of posture in all positions
Encourage normal movement patterns
Advise patient on healing times
Ergonomic advice

Exercises
Progress core stability and kinetic chain
Ensure good muscle endurance
Ensure adequate cervical ROM
Scapular and gleno-humeral dynamic control and ROM
Rehabilitation Guidelines for Patients Undergoing Cervical Surgery. Page 7
Assist to increase general fitness and functional retraining following restrictions
Swimming - backstroke to start and then front crawl after 6 months if technique good
Can attend gym but no rowing or upper body weights until 3 months post op
Proprioception: upper limb, lower limb and cervical spine
Increase walking

Manual therapy
Soft tissue, scar tissue and joint mobilisations treat as appropriate
Aggressive manipulative (grade v) techniques to the cervical spine should be avoided
Neural dynamics assessment and treatment as indicated

Recovery/rehabilitation: Phase 6 months+

Milestones to achieve by 6 months:
1. Return to normal activities
2. Achieving above goals
3. Continuing independence with exercise programme
4. Recovery can take up to 18 months

Failure to meet milestones:
Refer back to surgical team. Outpatient physio can continue if the patient is still making progress. If appropriate a referral to pain clinic may be considered (consultant referral required).

3. Monitoring and the effectiveness of this guideline

If a patient is failing to progress:

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Causes</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper limb pain</td>
<td>Neural sensitivity. GHJ/scapular stiffness/ dysfunction/thoracic referral. Recurrence of radiculopathy. Central pain component.</td>
<td>Make sure patient has adequate analgesia. Exercises should be pain free. If pain persists refer back to surgical team. Assess as appropriate</td>
</tr>
<tr>
<td>Condition</td>
<td>Possible Cause(s)</td>
<td>Management</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Inflamed or/and oozing wound</td>
<td>Infection.</td>
<td>Review by CNS/surgical team as appropriate Referral back to the surgical team or the GP.</td>
</tr>
<tr>
<td>Increase of neurological symptoms</td>
<td>Instability. Neuropathodynamics.</td>
<td>Review pre-operative neurological status. Discuss with the surgical team.</td>
</tr>
<tr>
<td>Pain on appropriate exercises</td>
<td>Poor technique. Inadequate pain control.</td>
<td>Review analgesia and exercises.</td>
</tr>
<tr>
<td>Headaches</td>
<td>Postural. Poor technique with exercises. Dural/Neural</td>
<td>Check exercises technique and posture. Discuss with team.</td>
</tr>
<tr>
<td>Lower Back Pain</td>
<td>Neural sensitivity. Compensation. Degenerative Lx.</td>
<td>Treat as appropriate.</td>
</tr>
</tbody>
</table>

**Appendix 1: Glossary of terms**

**Arthroplasty:** The articular surface of a musculoskeletal joint is replaced, remodeled or realigned.

**Cervical artificial disc:** Removal of a damaged or degenerated cervical disc and replacing it with an artificial disc device. Cervical discs are the cushions or shock absorbers between the vertebra) of the cervical spine.
Corpectomy: Removal of all or part of the vertebral body, usually as a way to decompress the spinal cord and nerves. Corpectomy is often performed in association with some form of discectomy.

Decompression: A small portion of the bone over the nerve root and/or disc material from under the nerve root is removed to give the nerve root more space and provide a better healing environment.

Discectomy: Removal of herniated disc material that presses on a nerve root or the spinal cord.

Foramenotomy: Used to relieve pressure on nerves that are being compressed by the intervertebral foramina, the passages through the bones of the vertebrae of the spine that pass nerve bundles to the body from the spinal cord.

Fusion: Where two or more vertebrae are joined together with a section of bone to stabilise and strengthen the spine.

Laminectomy: Removal of a portion of the vertebral bone called the lamina. The back muscles are pushed aside rather than cut and the parts of the vertebra adjacent to the lamina are left intact.

Appendix 2: Other linked trust policies and guidelines
https://www.rnoh.nhs.uk/our-services/rehabilitation-guidelines

Appendix 3: Extra sources of information and support

Rehabilitation Guidelines for Patients Undergoing Cervical Surgery. Page 10
Date Approved 25/01/2018
Version 1.0
Appendix 4: Privacy impact assessment and equality analysis

This guideline is available on request in large print and alternative languages. It is a manager’s responsibility to ensure employees are aware of these options.

* The following policies must be sent for review to the Local Counter Fraud Specialist:

- Fraud and Bribery
- Standard Financial Instructions
- Declaration of Interests
- Gifts and Hospitality
- Whistleblowing
- Disciplinary
- IT
- Anti-Money Laundering
- Managing Sickness Absence
- Secondary Employment
- Expenses
- Overpayment
- Financial Redress
- TOIL (Time off in Lieu)
- Code of Conduct/Standards of Business Conduct
- Data Protection
- Lone Worker
- Patient Transport
- Commercial Sponsorship
- Overseas Visitors
- Disclosure