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Anterior Cervical Decompression and Fusion Rehabilitation Guidelines

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

Possible complications of surgery:
• Infection
• Dural tear
• Nerve/spinal cord damage
• On-going pain
• Speech/swallowing problems- usually temporary
• Worsening of existing myelopathy or radiculolpathy
• 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

Post- operatively
Always check the operation notes and post-op instructions. Discuss any deviation from routine guidelines with Surgeon.
May require collar if documented (rare with modern instrumentation)
On discharge
Ensure all patients have been referred for outpatient physiotherapy to begin at 6 weeks.

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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 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 (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 4-6 weeks post-operatively or longer if required. It is important that the patient can sit comfortably in the car, turn their neck as required for driving and be able to carry out an emergency stop without hesitation.
3. ***For the first 4- 6 weeks lift nothing heavier than 1kg (or ½ full kettle:*** Slowly increase as advised by your consultant.
4. **Walking:** No restrictions, should be increased gradually each day.
5. **Sitting:** Should be in a supportive chair.
6. **Sleeping:** Advice on neutral cervical spine position

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 i.e.; 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 core stability
5. Attain functional cervical spine AROM

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Recovery/rehabilitation phase: 6 weeks to 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

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 after 3 months check providing surgical team are in agreement and will be based on the demands of the job. Further information from occupational health services may be needed
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 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 glenohumeral posture dynamics and ROM
• 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

Milestones to achieve by 6 months:

1. Return to normal activities
2. Achieving above goals
3. Continuing *(Independent)* with exercise programme
4. Recovery can take up to 18 months

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