ANTERIOR CERVICAL CORPECTOMY
CLINICAL CARE GUIDELINE

Phase 1 (POD 1 – 6 weeks)

- + C-Collar x 6 weeks
- Typically, will wait to start PT until > 6 weeks

Phase 2 (6 weeks – 3 months)

- Begin regimented PT program (2-3x/wk) as needed
- These patients should maintain collar during PT.
- No overhead lifting/weights
- No cervical ROM exercises or prone exercises
- Focus on:
  - Basic mobilization & correctly performing ADL
  - Strengthening ability to perform self-care activities
  - Using assisted devices correctly (walker/cane/etc) for those who suffered severe myelopathy issues
  - Endurance (walking on treadmill/track/pool or recumbent bike)
  - Balance; Posture, Proprioception, and Gait training
  - Fine motor function with hands for those with myelopathy
  - +/- Pool Therapy
  - Can begin light strengthening exercises
    - Weight limit of < 20 lbs until 3 months post op
      - Can incorporate light weights or resistant bands

  - **Suggested Interventions**
    - UBE (upper body ergometer)
    - Bilateral stretching – 3 x 30 sec
      - e.g. pec. major/minor, lats, etc.
    - Teach chin tuck and VC for volitional deep cervical muscle contraction
    - Cranio-cervical flexion with visual biofeedback (pressure cuff stabilizer) – constant feedback
      - Inflate to 20 mmHg and place behind neck at suboccipital level while supine → increase pressure by 10 mmHg with upper cervical nod
    - UE strengthening exercises (maintain chin tuck): progress c resistance
      - elbow flex/ext
      - wrist flex/ext
      - grip/hand intrinsics
      - dexterity
- Scapular stabilization exercises (dumbbells):
  - sidelying: ER
  - supine: punches
- Shoulder shrugs & rolls, scapula retraction/depression
- Joint mobilizations (grades I-II) above/below surgical site for pain modulation
- Thoracic spine joint mobilizations (grades III-IV) or on foam roll
- Soft tissue mobilization for hypertonic paraspinal muscles
- Postural education and cueing (shoulders back, chest out and up)
- Scar mobility/cross friction massage at (10-12 weeks)
- Ice/modalities for pain/inflammation (no U/S)
- Computer/desk ergonomic workstation
  - arm’s length away
  - top of screen in line with forehead
  - elbows and hips at 90°
  - wrists neutral/keyboard downward slope
  - mouse same height as keyboard
  - sit in swivel chair to avoid twisting
- Education: review precautions, anatomy/biomechanics, surgical procedure, prognosis, etc.

- Avoid:
  - Overhead activity until after 2 months post op
  - Running/horseback riding for at least 6 months
  - Cervical ROM exercises

- Considerations
  - Consult doctor for return to driving
  - Avoid lotions/creams or submerging incision under water until fully healed
  - Consult doctor for return to work
    - Shorter for sedentary jobs

- Goals:
  - ↓ pain, 0-2/10 pain at rest
  - Improve scar mobility
  - Reestablish neuromuscular control of deep cervical stabilizers
  - Volitional contraction of deep neck flexors for 5 x 5 sec
  - Improve UE strength/mobility
  - Verbalize proper workstation set-up
  - Progressive walking program
Independent with HEP

Progress exercises once patient demonstrates proper form/technique and control of neutral spine with each repetition

D/C collar/brace per surgeon’s orders

### Phase 3 (3months – 6 months)

- Continue to progress strength & endurance with goal to return to baseline standing/walking duration & distance
  - Typically most post op patients at this time will be totally out of c-collar
  - Weight limit lifted.
    - Progress by 5 lbs every other week as tolerable.
  - Can begin to perform overhead activities at 3 months, but progress slowly
  - May be appropriate for home regimen instructions
  - May start using elliptical/stationary bike for more cardio exercises
  - Jogging/running should be avoided until 6 months post op

**Suggested Interventions**

- UBE (forward & backward)
- Gentle Cervical AROM (all directions), shoulder shrugs & rolls, scapula retraction/depression
- Cranio-cervical flexion with pressure cuff stabilizer
  - Inflate to 20 mmHg and place behind neck at suboccipital level while supine → increase pressure by 10 mmHg with upper cervical nod
- Cervical isometrics
  - flexion
  - extension
  - side-bending
  - rotation
- Scapular stabilization exercises:
  - standing: rows, extension, hor. abd, ER (Theraband or cable column)
  - prone (on stability ball): Y, T, W (dumbbells)
  - standing (facing wall): push-up plus
  - standing (back to wall): arm slide for low trap activation
  - standing: PNF D1/D2 patterns (Theraband or cable column)
  - rhythmic stabilization/perturbations (Theraband or BodyBlade)
  - wall circles (medicine ball)
- Cervical retraction (off end of table)
  - prone
  - supine
• sidelying
  o Thoracic spine joint mobilization/manipulation (grades IV-V)
  o Light progressing to Full work simulation activities

• **Goals:**
  o Volitional contraction of deep neck flexors for 10 x 10 sec
  o 0/10 pain with all or most activities
  o Able to tolerate work simulation activities without increase in symptoms
  o Verbally understands the return to work progression
  o Complete progressive walking program
  o Independent with HEP
  o Achieve *Neck Disability Index* MCID

**Phase 4 (6months +)**

• Progress to baseline with activity
• May take NSAIDs at this time

**Progressive walking program** – begin post-op Day 1

<table>
<thead>
<tr>
<th>Distance</th>
<th>Time</th>
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<tbody>
<tr>
<td>1 mile</td>
<td>20min at 6 weeks</td>
</tr>
<tr>
<td>2 miles</td>
<td>30min at 9 weeks</td>
</tr>
<tr>
<td>3 miles</td>
<td>45min at 12 weeks</td>
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References:


