Atlantic Health System
Atlantic Medical Group

Distal Biceps Repair
Rehabilitation Protocol
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MD visit at 1 week post-op
Physical therapy begins at 1 week post-op

Phase I: Post-operative (0-4 weeks)

Goals
- Protect healing repair
- Decrease pain/Edema
- Retard muscular atrophy
- Begin to restore motion
- Achieve full motion by 6 weeks
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Precautions
- Caution against lifting any weight or bearing weight through arm
- Avoid shoulder extension
- Use of sling/brace per physician instruction

Week 0-2:

Sling/Splint
- Use of sling for first 2 weeks or as needed when in community, or use of hinge brace if repair was done under tension per physician instruction

Interventions:
- Bulky dressing removed
- Address edema as needed, with compression wrap -hand to above elbow or with tubigrip stockinette
- Ice may be used if edema is significant
- Address wound with wound cleaning and dressing, as needed

Manual Therapy:
- Myofascial soft tissue mobilization to forearm and biceps musculature to relax biceps and other tight muscles. Avoid incision site

Exercises
- Wrist ROM, Forearm pronation/supination
- Finger ROM/ tendon glides
- Shoulder rolls
- Passive flexion and supination allowed as tolerated

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Week 2:

Splint/Sling
- Wean from use of sling unless out in community
- If wearing splint/brace will continue per physician's instructions

Interventions
- Following suture removal begin scar mobilization techniques — scar massage, kinesiotape, etc.
- Myofascial soft tissue mobilization /IASTM to forearm and biceps musculature to relax biceps and other tight muscles
- Continue edema control measures as needed

Exercises
- Instruction in gentle AROM of the elbow as tolerated or AAROM or table slides as needed
- PROM for elbow flexion and supination
- Gentle shoulder ROM avoiding excessive extension

Week 3:

Sling/ Splint
- Continue as above.

Interventions
- Use of heat modalities as needed to relax tight musculature
- Scar mobilization and myofascial soft tissue work /IASTM to forearm musculature, biceps/triceps to relax arm into extension
- No forceful passive stretching

Exercises
- AROM activities for elbow, wrist, forearm, light sponge gripping for hand
- PROM for elbow flexion and supination
- Gentle shoulder ROM avoiding excessive extension

Week 4-5:

Sling/ Splint
- D/C use of sling in community
- Continue use of brace per physician's instruction

Interventions
- As above, as needed

Exercises
- Gentle passive stretches may be initiated within the patient's comfort level to increase elbow extension

- Wrist weight exercises initiated 1-3 lbs. Not pronation supination
- If patient has reached full elbow ROM, therapy will be put on hold until the 6 week time
- Patient will work on his HEP

Phase II: Intermediate (6-12 weeks)

Goals
- Achieve full elbow ROM including pronation and supination
- Adherence to HEP
- Begin to regain and improve muscular strength

Precautions
- Avoid lifting heavy weight, except as allowed with exercise program

Week 6-7:

Sling/Splint
- D/C Brace if was wearing one

Interventions
- Manual Therapy- Myofascial soft tissue work as needed

Exercises
- Wrist weights,-pronation supination progression with weight
- Initiate light theraband program -yellow or red band
- Low level shoulder program- Triceps curl, ER, IR, Protraction, gentle biceps curl
- NuStep or UBE for ROM and progress to strengthening

Weeks 8-10:

Exercises
- Progress to light pulley weights
- Progress HEP therabands to green
- Progress to light plyometrics, including body blade, therabar and light ball tossing
- May initiate Thrower's Ten as appropriate
- No push-ups

Weeks 10-12:

Exercises
- Initiate work conditioning program with lifting activities. Advance weight slowly and only with patient comfort
- Progress to universal set with bilateral midrows, lower trap pulls, chest press

Phase III: Advanced strengthening (12-16 weeks)

Goals
- Increase strength, power, endurance
- Maintain full elbow ROM
- Gradually initiate sporting activities
- Improve Sport/work specific balance and proprioceptive skills

Precautions
- 12 weeks: General activity as tolerated is permitted
- 6 months: Full activity without restriction is allowed. Full Return to Sport per physician

Week 12:

Exercises
- Continue shoulder program- Progress to Advanced Thrower's Ten Program
- Manual resistance diagonal patterns
- Weight program
- Plyometric exercise program, (2 hand plyos close to body only)
- Chest Pass, side throw close to body

Week 13:

Exercises
- Continue all above
- Program plyometrics to 2 hand drills away from body- side to side throws, soccer throws

Week 14-15:

Exercises
- Continue all above
- Progress isotonic machine strengthening ex (if desired), Bench press Seated, Lat pull down
- Initiate golf, swimming
- Initiate interval hitting program
- Initiate one hand plyometric throwing (stationary throws)
- Initiate one hand wall dribble
- Initiate one hand baseball throws into wall.

Phase IV: Return to activity (16+ weeks)

- GOALS
- Continue to increase flexibility, endurance and strengthening of upper extremity
- Gradual return to sport activities per physician

Week 16-21:

Exercises
- Initiate interval throwing program Phase 1 long toss program.

- Continue Advanced thrower's Ten Program and plyometrics
- Continue to stretch before and after throwing

Week 22-24+:

Exercises
- Progress to Phase 2 throwing (once successfully completed Phase 1)

Week 30+

Exercises
- Once return to sports utilize Thrower's Ten program
- Continue shoulder and elbow ROM & stretching program
- Gradually Progress to competitive throwing [sports per physician timeline

References

Rose, D.M., Archibald, J.D., Sutter, E.G. et al. Biomechanical analysis suggests early rehabilitation is possible after single-incision EndoButton distal biceps repair with Fiberwire. Knee Surg Sports Traumatol Arthrosc 19,1019-1022 (2011).
Panagopoulos, A., Tatani, 1 ., Tsoumpos, P. et al. Clinical Outcomes and Complications of Cortical Button
Distal Biceps Repair: A Systematic Review of the Literature. Journal of Sports Medicine Vol 2016 Article ID 3498403 (2016)
Spencer, E.E., Tisdale, A., Kostka, K., et al. Is Therapy Necessary After Distal Biceps Tendon Repair Hand 2008 Dec; 3(4) 316-319.

The above protocol is intended to be utilized by the clinician as a guideline in the treatment of this disorder. It is based on current research and has been formulated as a collaborative effort between Physicians and Physical Therapists. It is not intended to serve as a substitute for sound clinical decision making. Every patient is a unique case, and it should be anticipated that not all patients will fit into the timelines set forth in this protocol. If the Physical Therapist has any questions regarding the course of treatment, the referring physician should be contacted for further guidance.