Flexor Tendon Protocol, 4 Strand Repair

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Flexor Tendon Repair - Place and Hold (Strickland/Cannon)/Modified Duran Combination

This is an "active-hold" or "place-hold active mobilization" protocol. The digits are passively placed in flexion, and the patient then maintains the flexion with a gentle muscle contraction. Patients learn to use only minimal force by practicing with the uninjured hand and may also use biofeedback to monitor
the strength of contraction (less than 10 mV on a Cyborg unit).

3-5 days: The postoperative dressing is removed. A light dressing and edema control are applied as needed. Coban should be removed prior to exercises. If edema is significant, short arc motion should be used.
Splint: A dorsal blocking splint is fabricated with wrist at 20 degrees of flexion, MP joints at 50 degrees, IPs at 0 (unless otherwise specified).
Either a tenodesis hinged exercise splint or a dorsal block exercise template is fabricated, limiting wrist ext to 30 degrees, MP extension to 60 degrees. Full digit flexion and full IP extension are allowed.

Exercise: Every hour, patients perform the Strickland version of modified Duran exercises (15 repetitions of PROM to the PIP and DIP joints and the entire digit) in the dorsal blocking splint, followed by 25 repetitions of place-hold digit flexion in the exercise template or tenodesis splint. The patient extends the wrist actively with simultaneous passive digit flexion and actively maintains digit flexion for 5 seconds, with the least amount of force possible to maintain flexion. The patient then relaxes and allows the wrist to flex and digits to extend within the limits of the template or splint.

***Alternate option* if the therapist feels the patient is reliable and if the patient is able to demonstrate correct technique of place/hold in therapy: at the therapist's discretion, the patient can use only the dorsal block splint and come out of it during supervised sessions with the therapist to perform place-hold exercises and at home.**

4 weeks
Splint: The patient still wears dorsal blocking splint except for tenodesis exercises.
Exercise: The tenodesis exercises continue every 2 hours with 25 repetitions. In the dorsal blocking splint, the patient can begin active light composite fisting and FDS gliding 15 repetitions every hour. The patient continues the modified Duran passive motion within the dorsal blocking splint.

4.5 weeks
Splint: The patient continues dorsal blocking splint, but removes hourly for active motion outside of splint.
Exercise: The patient can start active light composite fisting, FDS gliding, composite wrist flexion/digital flexion into composite wrist and digital ext x 15 reps each.

5 weeks
Splint: The patient continues dorsal blocking splint, removing hourly for active motion.
Exercise: Continue light composite fisting, FDS gliding, composite wrist/digital flexion into composite wrist/digital extension. Add hook fist if needed to improve tendon gliding.

6 weeks
Splint: Discontinue dorsal blocking splint.
Exercise: Discontinue tenodesis. Continue with active motion hourly outside of splint 15 repetitions each. Add blocking if needed. Begin passive extension. No heavy use of hand.

8 weeks
Exercise. Progressive resistive exercise is initiated. The patient gradually resumes activities of daily living.

FPL is moved more aggressively than digit flexors (putty exercises are initiated by 7-8 weeks),

and flexors to the small finger are moved the least aggressively.

At 10-12 weeks, may gradually return to heavier lifting with full use of hand, including sports, by 14 weeks

If at any time the therapist feels that the patient in not progressing as expected, please contact physician/PA to discuss