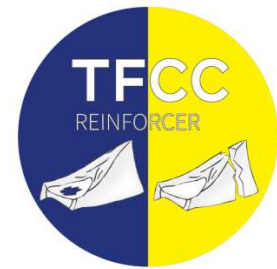


SUPPLEMENTAL MATERIAL II



This appendix provides readers with additional information about the authors' work.

Supplement to:

tREatment of triangular FibrOcartilage ComplEx Ruptures (REINFORCER): Protocol for Randomised, Controlled, Blinded, Efficacy Trial of Triangular Fibrocartilage Complex Tears

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Home rehabilitation protocol after wrist arthroscopy - Central/Radial tear

The first contact with occupational therapy, will be at two weeks post operatively, after the bandage removal or the home rehabilitation protocol can be instructed by a hand therapist at the operation day.

- Active daily living (ADL) problems are detected at the first visit and compensatory strategies are then started if need.
- The patient receives Instruction in home exercises.

Home self-exercises

Two-four to weeks postoperatively:

ADL: The patient can do light daily activities. e.g. dry dust-off, put-on clothes, make a sandwich. Maximum load one-two kg.

15-20 repetitions of each exercise, four times a day:

Exercise 1: Active flexion and extension of the wrist.

Exercise 2: Active radial- ulnar deviation of the wrist.

Exercise 3: Active supination and pronation of the wrist.

All exercises and ADL are done within the pain limit.

Four-eight weeks postoperatively:

ADL: The patient can do moderately heavy daily activities. e.g. shopping, lifting pots and pans while cooking, hanging laundry. Maximum load two-five kg.

15-20 repetitions of each exercise, four times a day:

Exercise 1a: Active Flexion and extension of the wrist over tabletop with maximum one kg load (small hand weight, training band or something similar).

Exercise 2a: Active Radial- ulnar deviation of the wrist over tabletop with maximum one kg load (small hand weight, training band or something similar).

Exercise 3a: Active supination and pronation of the wrist, with hammer maximum weight 200 g (or something similar).

All exercises and ADL are done within the pain limit.

Week 8-12 postoperatively:

ADL: The patient can do heavy daily activities. e.g. carry shopping bags, moderately manual work, gardening. Maximum load 5-10 kg.

The patient will continue doing Exercise 1a, 2a, and 3a, as in week four-six.

three-four times a day, supplementary do five repetitions of 30 seconds for each direction of movement:

Passive flexion of the wrist over a tabletop.

Passive extension of the wrist over a tabletop.

81 Passive pronation, with the elbow placed at the side of the body.

82 Passive supination, with the elbow placed at the side of the body.

83

84 *All exercises and ADL are done within the pain limit.*

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87 **Week 12 postoperatively:**

88 ADL: The patient can do the heaviest daily activities. e.g. resume fitness training, heavy
89 manual work.

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Rehabilitation protocol after wrist arthroscopy - hand therapy group - Ulnar tear

The general scope of rehabilitation at two-four weeks post operatively consists of: *primary*, management of edema, pain, ADL (activities of daily living), and scar tissue, *secondary*, AROM (active range of motion).

The general scope of rehabilitation at four-eight weeks post operatively consists of: management of edema, ADL, AROM, and scar tissue.

The general scope of rehabilitation at eight weeks post operatively and onwards consists of: management of ADL, scar tissue, AROM, PROM (passive range of motion), and strength training.

The first contact with occupational therapy, will be at two weeks post operatively when the cast is removed.

- ADL problems are detected at the first visit and compensatory strategies are then started.
- Instruction in home exercises.
- Adjustment of a pre-made wrist orthosis (Basic Wrist splint, or short Wrist lacer splint or similar). The orthosis can optionally be used in-between training, from two to eight weeks postoperatively. The orthosis should be completely discontinued at eight weeks.

Occupational Therapy Intervention two-four weeks postoperatively:

- ADL: The patient can do light daily activities. e.g. dry dust-off, put-on clothes, making a sandwich. Maximum load one kg.
- Training of stability and coordination in the wrist (True-Balance or similar exercise) one-minute x three sets.
- Finger training with Thera Putty Catell (extra soft). four exercises x 15 repetitions.
- Isometric training of wrist flexion and extension within the pain limit. 10 seconds x 10 repetitions x three sets.
- Control that the home exercises are done correctly.

Occupational therapy intervention four-eight weeks postoperatively:

- ADL: The patient can do moderately heavy daily activities. e.g. shopping, lifting pots and pans while cooking, hanging laundry up. Maximum load three kg.
- Training of stability of the wrist (serving tray with ball, True-Balance, or similar exercise) one-minute x three sets.
- Supination and pronation of the wrist, with hammer maximum weight 200 g. 15 repetitions x three sets.
- Isometric training of wrist flexion and extension within the pain limit. 10 seconds x 10 repetitions x three sets.

Home self exercises two-four weeks postoperatively:

The training is graded and adjusted to the patients ADL problems and AROM.

15 repetitions of each exercise, four times a day (for the exercises one-four).

- Exercise 1: Flexion and extension of the wrist with TheraBand training elastic (yellow).
- Exercise 2: Radial- ulnar deviation of the wrist maximum 1 kg. over a tabletop.
- Exercise 3: Active supination and pronation of the wrist, unloaded, within the pain limit.
- Exercise 4: Flexion and extension of all fingers, if needed the patient can get a hand trainer (Dr. Winkler DUMO or similar).
- Exercise 5: Passive flexion and extension of the wrist, within the pain limit. five repetitions of 30 seconds, for each direction of movement.

Home self exercises four-eight week postoperatively:

The training is graded and adjusted to the patients ADL problems and AROM.

15 repetitions of each exercise, four times a day (for the exercises one-four).

- Exercise 1a: Flexion and extension of the wrist with TheraBand training elastic (yellow or red). The exercise is performed over a tabletop with the hand in pronation.
- Exercise 2a: Radial- ulnar deviation of the wrist maximum two kg. Over a tabletop.
- Exercise 3a: Supination and pronation of the wrist, with hammer maximum weight 200 g.
- Exercise 4a: Finger training with Thera Putty Catell (light blue/soft). four exercises x 15 repetitions.

Occupational therapy intervention 8-12 weeks postoperatively:

- ADL: The patient can do heavy daily activities. e.g. ride a bike, lift heavy pots and pans while cooking, carry shopping bags. Maximum load five kg.
- Training of stability of the wrist (weight bearing on balance board or soft ball, or similar exercise)
- Training of dynamic stability of the supination and pronation of the wrist with TheraBand flex bar (yellow) or similar exercise.
- 15 repetitions x three sets.
- Supination and pronation of the wrist, with hammer max 300g.
- 15 repetitions x three sets.
- Isometric training of wrist flexion, extension, pronation, and supination within the pain limit. 10 seconds x 10 repetitions x three sets.
- Passive flexion, extension, pronation, and supination of the wrist, within the pain limit. Five repetitions of 30 seconds for each direction of movement.
- Exercise 5a: Passive flexion, extension, pronation, and supination of the wrist, within the pain limit. Five repetitions of 30 seconds for each direction of movement.

Home self exercises 8-12 weeks postoperatively:

The training is graded and adjusted to the patients ADL problems and AROM.

15 repetitions of each exercise, four times a day (for the exercises one-four).

- Exercise 1b: Flexion and extension of the wrist with TheraBand training elastic (red). The exercise is performed over a tabletop with the hand in pronation.
- Exercise 2b: Radial- ulnar deviation of the wrist maximum three kg. over a tabletop.
- Exercise 3b: Supination and pronation of the wrist, with hammer maximum weight 300 g

- Exercise 4b: Finger training with Thera Putty Catell (light/blue soft). four exercises x 15 repetitions.
- Exercise 5a: Passive flexion, extension, pronation, and supination of the wrist, within the pain limit. Five repetitions of 30 seconds for each direction of movement.
- Exercise 6: Isometric training of wrist flexion, extension, pronation, and supination within the pain limit. 10 seconds x 10 repetitions x three sets.

Occupational therapy intervention at 12 weeks postoperatively and onward:

- ADL: The patient can do the heaviest daily activities. e.g. resume fitness training, heavy manual work, pt. must only lift and carry within the pain limit.
- Training of stability of the wrist (weight bearing on balance board or soft ball, or similar exercise)
- Training of dynamic stability of the supination and pronation of the wrist with Thera-Band flex bar (Green) or similar exercise. 15 repetitions x three sets.
- Supination and pronation of the wrist, with hammer no maximum weight.
- Continued isometric training of wrist movements within the pain limit.
- Passive flexion, extension, pronation, and supination of the wrist, within the pain limit. Five repetitions of 30 seconds for each direction of movement.
- If needed a CPM machine can be used (PS1 Pronation/Supination).

Home self exercises twelve weeks postoperatively and onward:

The training is continuously graded and adjusted to pts ADL problems.

15 repetitions of each exercise, four times a day (for the exercises one-four).

- Exercise 1c: Flexion and extension of the wrist with TheraBand training elastic (green) The exercise is performed over a tabletop with the hand in pronation.
- Exercise 2c: Radial- ulnar deviation of the wrist maximum four-five kg over a tabletop.
- Exercise 3c: Supination and pronation of the wrist, with hammer no maximum weight.
- Exercise 4c: Finger training with Thera Putty Catell (blue/medium firm). Four exercises x 15 repetitions.
- Exercise 5c: Passive flexion, extension, pronation, and supination of the wrist, within the pain limit. Five repetitions of 30 seconds for each direction of movement.
- Exercise 6: Isometric training of wrist flexion, extension, pronation, and supination within the pain limit. 10 seconds x 10 repetitions x three sets.

Rehabilitation protocol after wrist arthroscopy- surgery group - Ulnar tear

The general scope of rehabilitation at six-eight weeks post operatively consists of: *primary*, management of edema, pain, ADL (activities of daily living), and scar tissue, *secondary*, AROM (active range of motion).

The general scope of rehabilitation at 8-12 weeks postoperatively consists of: management of edema, ADL, AROM (active range of motion), and scar tissue.

The general scope of rehabilitation at 12 weeks postoperatively and onwards consists of: management of ADL, scar tissue, AROM, PROM (passive range of motion), and strength training.

The first contact with occupational therapy, will be at six weeks post operatively when the cast or orthosis is removed.

- ADL problems are detected at the first visit and compensatory strategies are then started.
- Instruction in home exercises.
- Adjustment of a pre-made wrist orthosis (Basic Wrist splint, or short Wrist lacer splint or similar), however this is optional. The orthosis can optionally be used in-between training, from 6 to 10 weeks postoperatively. The orthosis should be completely discontinued at 10 weeks.

Occupational Therapy Intervention six-eight weeks postoperatively:

- ADL: The patient can do light daily activities. e.g. dry dust-off, put-on clothes, making a sandwich. Maximum load two kg.
- Training of stability and coordination in the wrist (True-Balance or similar exercise) one-minute x three sets.
- Finger training with Thera Putty Catell (extra soft). four exercises x 15 repetitions.
- Isometric training of wrist flexion and extension within the pain limit. 10 seconds x 10 repetitions x three sets.
- Control that the home exercises are done correctly.

Home self exercises six-eight weeks postoperatively:

The training is graded and adjusted to the patients ADL problems and AROM.

15 repetitions of each exercise, four times a day (for the exercises one-four).

- Exercise 1: Flexion and extension of the wrist with TheraBand training elastic (yellow).
- Exercise 2: Radial- ulnar deviation of the wrist maximum one kg over a tabletop.
- Exercise 3: Active supination and pronation of the wrist, unloaded, within the pain limit.
- Exercise 4: Flexion and extension of all fingers, if needed the patient can get a hand trainer (Dr. Winkler DUMO), or similar.
- Exercise 5: Passive flexion and extension of the wrist, within the pain limit. 5 repetitions of 30 seconds, for each direction of movement.

Occupational therapy intervention 8-12 weeks postoperatively:

- ADL: The patient can do moderately heavy daily activities. e.g. shopping, lifting pots and pans while cooking, hanging the laundry up. Maximum load five kg.
- Training of stability of the wrist (serving tray with ball, True-Balance or similar exercise) one-minute x three sets.
- Supination and pronation of the wrist, with hammer, maximum weight 200 g. 15 repetitions x three sets.
- Isometric training of wrist flexion and extension within the pain limit. 10 seconds x 10 repetitions x three sets.

Occupational therapy intervention 12 and onward postoperatively:

- ADL: The patient can do the heaviest daily activities. e.g. resume fitness training, heavy manual work, pt. must only lift and carry within the pain limit.
- Training of stability of the wrist (weight bearing on balance board or soft ball, or similar exercise)
- Training of dynamic stability of the supination and pronation of the wrist with Thera-Band flex bar (yellow) or similar exercise. 15 repetitions x three sets.
- Supination and pronation of the wrist, with hammer max 300 g. 15 repetitions x three sets.
- Isometric training of wrist flexion, extension, pronation, and supination within the pain limit. 10 seconds x 10 repetitions x three sets.
- Passive flexion, extension, pronation, and supination of the wrist, within the pain limit. five repetitions of 30 seconds for each direction of movement.

Home self exercises week 8-12 postoperatively:

The training is graded and adjusted to the patients ADL problems and AROM.

15 repetitions of each exercise, four times a day (for the exercises one-four).

- Exercise 1a: Flexion and extension of the wrist with TheraBand training elastic (yellow or red). The exercise is performed over a tabletop with the hand in pronation.
- Exercise 2a: Radial- ulnar deviation of the wrist maximum two kg over a tabletop.
- Exercise 3a: Supination and pronation of the wrist, with hammer maximum weight 200 g.
- Exercise 4a: Finger training with Thera Putty Catell (light blue/soft). Four exercises x 15 repetitions.
- Exercise 5a: Passive flexion, extension, pronation, and supination of the wrist, within the pain limit. Five repetitions of 30 seconds for each direction of movement.

Home self exercises 12 weeks and onward postoperatively:

The training is graded and adjusted to the patients ADL problems and AROM.

15 repetitions of each exercise, four times a day (for the exercises one-four).

- Exercise 1b: Flexion and extension of the wrist with TheraBand training elastic (red). The exercise is performed over a tabletop with the hand in pronation.
- If needed a Continuous Passive Motion (CPM) machine can be used (PS1 Pronation/Supination).
- Exercise 2b: Radial-ulnar deviation of the wrist maximum three kg. Over a tabletop.
- Exercise 3b: Supination and pronation of the wrist, with hammer maximum weight 300 g.
- Exercise 4b: Finger training with Thera Putty Catell (dark blue/medium firm). Four exercises x 15 repetitions.

- 325 – Exercise 5a: Passive flexion, extension, pronation, and supination of the wrist, within
326 the pain limit. Five repetitions of 30 seconds for each direction of movement.
327 – Exercise 6: Isometric training of wrist flexion, extension, pronation, and supination
328 within the pain limit. 10 seconds x 10 repetitions x Three sets
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331 **Exercise equipment:**
332 *Inimove Denmark / True-Balance.*



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340 Dr. Winkler DUMO
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348 Thera Putty Catell, white is super soft, light blue is soft, and dark blue being medium firm.



350 An extra soft mixture is achieved when mixing one-part white, with one-part light blue.

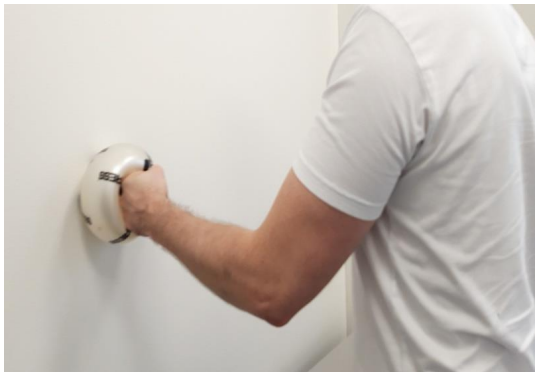
352 TheraBand training elastic, yellow is 1.3 kg, red is 2.5 kg, and green is 3 kg.



356 TheraBand Flex bar, yellow takes two and half kg of force to bend to a u-shape, green takes
357 seven kg of force to bend to a u-shape.



363 Soft training ball
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366 The PS1 Forearm Pronation/Supination CPM machine
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