Goshen Physicians

ORTHOPEDICS & SPORTS MEDICINE

Quadriceps Tendon Repair Protocol

Recommendations

- PROM and gentle AAROM 0 – 45 x 2 weeks, 0-60° x 4 weeks with hip flexed; 0 - 90° x 6 weeks
- No AROM Knee Extension x 4 weeks.
- WBAT in brace locked in full extension.
- Wear brace for 6 weeks.
- No driving for 6 weeks if right leg is involved.
- Ice 3 - 4 times daily for the first week and then as needed thereafter for pain and swelling.
- Return to sport and/or work to be determined by the physician.
- **Communication with the physician and/or PA is imperative to obtain patient-specific recommendations; modify the protocol accordingly.**

0 - 4 weeks
hip flexed.

- PROM and gentle AAROM 0-45 x 2 weeks, 0 - 60° x 4 weeks with
- WBAT in brace locked in full extension.
- No AROM Knee Extension x 4 weeks.
- Use e brace (if applicable) (0 - 60°)
- Submaximal isometrics - adductors, gluteals, abductors, hamstrings.

1. Initiate quad sets.
2. A/RROM of ankle.
3. Initiate patella mobilizations.
4. Stretching - hamstrings, gastroc-soleus, iliotibial band (NWB).
5. Begin seated hamstring curls 0-60°.
6. Begin Multi-hip machine with pad proximal to knee.
7. Electrical stimulation and/or biofeedback for quadriceps and hamstrings.
8. Modalities to minimize effusion.
9. Begin SLR's in brace locked at 0° without weight at 2-4 weeks. Begin ABD, ADD and Extension first, Flexion SLR dependent on quad control.

4 - 6 Weeks

- Begin PWB at 4 weeks with brace (0 - 60° depending on quad control) (FWB by 6 weeks with brace 0 - 90°).
- Begin AROM without weight for short and long arc quads.

1. ROM 0 - 90° - with hip flexed and extended.
2. Begin aggressive patellar mobilizations and scar tissue massage.
3. Initiate weight shifting with isometric hold in a mini-squat and anterior lunge position (20-30° knee flexion).
4. Consider aquatic therapy at this time.
5. Add seated heel raises. Progress to standing position as weight bearing status and quad control improves.
6. Modalities for continued control of effusion and edema.

6 - 8 Weeks

- Wean from brace at 6 weeks as quad control improves.
- Begin RROM.

1. Continue SLR's.
2. Begin <u>submaximal</u> knee extension isometrics (60 - 90°).
3. Begin static single-leg balance on floor. Progress to dynamic single-leg balance activities (e.g. upper or lower extremity reaching, 4-way theraband, BAPS, etc.) as lower extremity muscle control allows.
4. Begin with bike for ROM. May begin exercise program as effusion and ROM allows.
5. Begin retroambulation.
6. Add leg press.
7. Initiate isometric squats and progress to dynamic squats emphasizing lower ranges (e.g. 60 - 90°) and proper technique.*****
8. Begin closed kinetic chain terminal knee extensions (CKC TKE) with theraband resistance.
9. Begin hip hiking.

8 - 12 Weeks

- Emphasize concepts of frequency, duration and intensity of training.
- **P/AROM equal, bilaterally, by 12 weeks.**
- Consider orthotics, taping , bracing, etc. as appropriate to facilitate training and proper biomechanics.

1. Begin lateral step-ups/downs beginning at 2" and progressing height only if proper technique is maintained (e.g. no hip substitution).
2. Add Sportcord activities (e.g. marching, lateral stepping in squat position, etc.)
3. Initiate knee extension isotonics (30 - 90°) as tolerated.*****
4. Progress endurance training on bike with emphasis on high RPM's to minimize patellofemoral compression.
5. Progress static and dynamic single-leg balance activities to unsteady surfaces (e.g. pillow, half foam roll, BAPS board, etc.) as lower extremity muscle control allows.
6. Begin mini-tramp marching.

12 Weeks +

- **Equal strength, bilaterally, by 16 weeks.***
- Progress to independent home exercise program.
- Emphasize importance of proper lower extremity biomechanics. **DO NOT LET RESISTANCE DICTATE TECHNIQUE !!!**
- Return to sport and/or work to be determined by the physician.

1. Progress knee extension isotonics. May progress to 0 - 90° arc as tolerated.*
2. Progress to lunges (e.g. anterior, lateral, etc.) as tolerated.
3. Begin sport- and/or work-specific activities per physician.
4. Initiate mini-tramp jogging.
5. Begin return to running program (e.g. treadmill, road, etc.) as appropriate.
6. Begin fitter and/or slide board.
7. Initiate plyometrics as appropriate.

***May vary depending on the presence, degree and location of DJD.**