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Tibial Tubercle Osteotomy

General Principles:
This protocol was designed to provide the rehabilitation professional with a guideline of care. It should be stressed that this is only a protocol and should not be a substitute for clinical decision making regarding a patient's progression. Actual progression should be individualized based upon your patient's physical examination, progress, and presence of any complications. The total length of rehabilitation will vary depending on the following factors: severity or acuteness of injury, age, health, personal goals of patient, or healing of the fracture site.

PHASE I: (Maximum Protection-weeks 0-6)

Weeks 0-6

Weight Bearing-
1. To be specified by physician: partial to full WB over 6 weeks

Orthotics-
1. Brace locked in full extension when ambulating for 6 weeks

Modalities (PRN)-
1. Ice, E-stim, Compression, and Elevation as needed to control pain and swelling
2. Ice for 20 minutes following exercises throughout protocol.

ROM –
1. Weeks 0-2: 0-45*
2. Weeks 3-6: working up to 90* by week 6

Exercises-
1. Patellar mobilizations
2. Start submaximal quad isometrics and increase intensity through this phase, with use of neuromuscular re-education
3. Week 3 Start hamstring isometrics
4. Week 3 Start 4 way SLR with brace locked in extension or make sure pt has no extensor lag

PHASE II: (Beginning Strengthening)

Weeks 7-8

Weight Bearing-
1. Full WB

Orthotics-
1. Per physician specification, either discontinue brace after 6 weeks or open 0-90*

Modalities (PRN)-
1. Continue only as needed.

ROM-
1. Work toward full ROM.

(cont'd week 7-8)

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Exercises-.
1. Stationary bike
2. Add resistance with multi plane SLR
3. Work into closed chain ex, focusing on quality VMO function
4. Shuttle / Leg Press
5. Resisted walking
6. Normalize gait
7. May start aquatic program

PHASE III: (Strengthening)

Weeks 9-11

Orthotics-
Wean out of brace if not already

ROM-
1. Maintain full ROM adding quad stretching as needed

Exercises-
1. May start Elliptical
2. Continue Phase II, advance resistance and duration as tolerated.
3. Advance unilateral open and closed chain strengthening.
4. Step ups, mini-squats, mini-lunges
5. Initiate proprioceptive activities.

PHASE IV: (Advanced Strengthening)

Weeks 12-20

Exercises-
1. Continue Phase III, advance resistance and duration as tolerated.
2. Progress difficulty and intensity of proprioception drills.
3. Begin Gym strengthening: leg press, hamstring curls, abd/adduction, **avoid knee extension.**
4. Initiate pool running and may may progress to jogging on land if cleared by surgeon.

PHASE V: (Return to Sport)

Weeks 20-24

Exercises-
1. Advance gym strengthening
2. Progress running/sprinting program
3. Begin multi-directional field/court drills
4. Begin bilateral and progress to unilateral plyometric drills
5. As strength and proprioception improve, progress sport-specific activities as tolerated
6. May perform functional testing if requested by physician
   See LE functional testing protocol (goal 90% of uninvolved leg)
   ***Please complete functional testing sheet and send results to physician**

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