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MPFL Reconstruction with Tibial Tubercle Osteotomy Protocol

Phase/ Goals	Immobilization	ROM	Therapeutic Exercises
<p>Phase 1 (0-2 weeks)</p> <p>Goals:</p> <ul style="list-style-type: none"> ● Edema and pain control ● Normal gait mechanics ● PROM: 0 → 70° ● Eliminate effusion 	<p>25% WB with crutches</p> <p>Hinged brace locked in extension for ambulation</p> <p>May unlock for sitting</p> <p>Brace can be removed for sitting, hygiene and PT</p>	<ul style="list-style-type: none"> ● Avoid open chain extension ● Begin PROM 0 – 70 deg in brace ● Gentle patellar mobs (avoid lateralization) <p>Modalities:</p> <ul style="list-style-type: none"> ● NMES if unable to perform SLR without lag ● Cryocuff/Game Ready Compression/ Ice 	<ul style="list-style-type: none"> ● Quad recruitment ● Quad sets, glut sets ● SLR x4 with assist until no lag ● Ankle pumps ● Heel slides without brace ● Hamstring sets ● Bridges
<p>Phase 2 (2-6 weeks)</p> <p>Goals:</p> <ul style="list-style-type: none"> ● No effusion ● Increase ROM ● Prevent atrophy 	<p><u>2-4 weeks</u>: 50% in brace unlocked 0-90</p> <p><u>4-6 weeks</u>: 50% weightbearing in brace fully unlocked</p>	<ul style="list-style-type: none"> ● 0-90 degrees until week 4 ● Full ROM after week 4 <p>Modalities:</p> <ul style="list-style-type: none"> ● Scar STM when incision healed ● Patellar mobs ● Manual assist extension/passive stretch ● HS STM for extension assist 	<ul style="list-style-type: none"> ● Heel slides/wall slides ● Lateral band stepping after 4 weeks ● LE stretching: HS, quads, ITB, piriformis (pain free) ● Quad sets/glut sets, clams/mini-hydrants/glut pushes ● Calf raises on leg press ● Single leg press ● Continue Hamstring set, heel slides, bridges

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<p>Phase 3 (6-10 weeks)</p> <p>Goals:</p> <ul style="list-style-type: none">• Normal knee ROM• Good patella mobility• Good quad contraction• Pain free ADLs• Pain free arc of motion in PT	<p>Wean brace</p> <p>Limit flexion to 110 deg until 8 weeks</p>	<ul style="list-style-type: none">• Full A/PROM <p>Manual:</p> <ul style="list-style-type: none">• Joint mobs PRN for full flex and ext ROM• Patellar mobs/ Scar STM with extractor• Avoid lateralization of patella <p>Modalities:</p> <ul style="list-style-type: none">• Ice/stim PRN	<ul style="list-style-type: none">• High seat, low resistance bike• Advance strengthening• Gait training: Heel toe• Closed chain arc of motion• Bilateral leg press• Small forward step-up progression• Hip extension progression• Minimal lunges• Double limb stance on progressively challenging surfaces• Mini squats• Planks• Continue glute/quad/core
<p>Phase 4 (11-18 weeks)</p> <p>Goals:</p> <ul style="list-style-type: none">• Pain free ADLs• Normal gait• Initiate running program• good single leg dynamic balance	<p>No brace</p>	<ul style="list-style-type: none">• Full A/PROM	<ul style="list-style-type: none">• Continue everything in phase 3• Walk/jog progression• Address muscle imbalances• Jogging patterns at 50-75% speed• Cross-training: elliptical, bike, swimming• 16 weeks: add plyos– jump squats, split jumps, sled drags

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<p>Phase 5 (19+ weeks)</p> <p>Goals:</p> <ul style="list-style-type: none">● Sport-specific training without pain or swelling● Maximize strength and flexibility● Patellar tracking symmetry		<ul style="list-style-type: none">● Continue Full A/PROM● Modalities PRN	<ul style="list-style-type: none">● Continue running progression● Ladder/footwork drills● Advance LE strength, flexibility● Single limb dynamic stability/agility● Gym-program activities● Sport-related strengthening● Advance plyo program: jump down, broad jump, change of direction● Full return to activities
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