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## REHABILITATION GUIDELINES FOR MCL REPAIR WITH IPSILATERAL HAMSTRING AUTOGRAFT AUGMENTATION

PHASE I (WEEK 0-6 WEEKS)	DATES:	
Appointments	MD appointment at 2 weeks for suture removal, 6 weeks for follow up  Physical therapy 2 x week beginning 2-5 days post op; can drop to 1 x week once 0-90 ROM is achieved and patient has improved quad set	
Rehabilitation Goals	<ul> <li>Pain and effusion management</li> <li>Full extension symmetrical to contralateral knee before first post op visit at 2 weeks</li> <li>PROM 0-90</li> <li>SLR without quad lag by 6 weeks</li> </ul>	
Precautions	<ul> <li>Flexion limited to 90 x 6 weeks</li> <li>Toe touch weight bearing with brace locked at 0 for 6 weeks, brace can be open 0-90 in seated</li> <li>No hamstring contraction x 6 weekse</li> <li>Avoid valgus loads</li> <li>Progressive exercises should be performed with the tibia in IR to decrease stress to the MCL</li> </ul>	
Suggested Therapeutic Exercises	<ul> <li>Prolonged extension- prone hang, supine with towel roll under ankle</li> <li>Ankle pumps</li> <li>Heel slide, wall slide no greater than 90</li> <li>Quad sets with NMES</li> <li>Isometric quad sets, then SLR/3 way hip with brace- NO ADDUCTION until 4 weeks</li> <li>Patellar mobilizations</li> </ul>	
Cardiovascular Exercises	No stationary bike for 6 weeks	
Progression Criteria	<ul> <li>Good quad control/SLR without lag</li> <li>PROM 0-90</li> </ul>	

PHASE II	(WEEK 6-12 WEEKS)
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Appointments	MD follow up at 6 weeks and 12 weeks		
	Continue physical therapy 2 x week		
Rehabilitation Goals	<ul> <li>Progress to full ROM</li> <li>Normal gait pattern without assistive device or brace</li> <li>No extensor lag</li> <li>Good quad control</li> <li>Core integration</li> </ul>		
Precautions	<ul> <li>May begin WBAT at 6 weeks</li> <li>Wean out of brace and off of A.D. when patient has good quad control</li> <li>No planting or twisting of the leg</li> <li>Avoid valgus loads</li> <li>Progressive exercises should be performed with the tibia in IR to decrease stress to the MCL</li> </ul>		
Suggested Therapeutic Exercises	<ul> <li>HEP 5 x week</li> <li>Strengthening: begin closed kinetic chain exercises with knee flexion</li> <li>Total gym, mini squats, mini lunges, bridges, wall squats 0-45 deg, step up/down, leg press 0-60 with resistance up to ½ body weight</li> <li>Progress neuromuscular proprioceptive/balance exercises including single leg balance progression-varying surfaces</li> <li>Core exercises: plank, side plank</li> <li>Pool: begin 4 way hip, lateral movement, deep water walking/jogging in place, progress to freestyle strokes but avoid breaststroke kick</li> </ul>		
Cardiovascular Exercises	<ul> <li>Stationary bike with minimal resistance, progress to road biking outdoor on flat roads only</li> <li>Treadmill walking, elliptical trainer, stair master</li> </ul>		
Progression Criteria	<ul> <li>Full ROM</li> <li>Normalized gait pattern</li> <li>Neuromuscular exercise without difficulty</li> <li>No dynamic valgus with exercises</li> </ul>		

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## DATES:

Appointments	Continue PT 1-2 x week
Rehabilitation Goals	<ul> <li>Hop drills without difficulty</li> <li>Good jumping mechanics with no dynamic valgus</li> <li>Begin return to sport activities</li> </ul>
Precautions	May begin straight line running at 12 weeks
Suggested Therapeutic Exercises	<ul> <li>HEP 5 x week</li> <li>Strengthening: closed chain exercises including leg press, lateral step downs, squats, hamstring curls with light weight, high repetition</li> <li>Agility drills: shuffling, hopping, running patterns</li> <li>Sport specific drills</li> </ul>

Cardiovascular Exercises	<ul> <li>May start freestyle swimming (avoid frog/breaststroke)</li> <li>Jogging on treadmill or even ground</li> </ul>
Progression Criteria	<ul> <li>Running without knee pain or effusion</li> <li>Hopping/agility drills without knee pain or effusion</li> <li>Quad strength within 90% of uninvolved leg</li> <li>Return to sport testing for repair at 5 months, reconstruction at 6 months</li> </ul>

References: Current Concepts of Physical Therapy 2016 edition, Cincinnati Sports Medicine and Orthopedic Center

PT name and date: Ariel Duvall PT, DPT

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