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### **REHABILITATION GUIDELINES FOR CHONDRAL REPAIR PROCEDURES(OATS, AUTOLGOUS CHONDROCYTE IMPLANTATION, MICROFRACTURE)**

#### **Stage 1(Day 1-2 weeks):**

ROM: patellar mobilization. No bracing except for ligament stabilization procedures.

Strength: SLR (without weights), isometric hamstrings, ankle pumping

Weight bearing: 0%

CPM: cumulative of 6 hours per day for the first 6 weeks post-operative(1-2 hours at a time) with a ROM of 0-50 degrees.

Modalities: EMG biofeedback to hamstrings and quadriceps prn; EMS prn; cryotherapy

Sports: none.

#### **Stage 2(2 weeks-4 weeks):**

ROM: No bracing except for ligament stabilization procedures; prone passive extension exercises and supine heels support extensions.

Strength: quad and hamstring active isometrics at 45 degrees with low resistance and a gradual progression, SLR with brace removed for exercise only at 0 degrees without weight.

Weightbearing: 0%

CPM: cumulative of 6 hours per day for the first 6 weeks post-operative(1-2 hours at a time) with a ROM of 0-50 degrees.

Modalities: as above.

Sports: none.

#### **Stage 3(4 weeks-6 weeks):**

ROM: increase as tolerated; no bracing except for ligament stabilization procedures;

Strength: Progress to PRE's with FROM.

Weightbearing: 25%

CPM: cumulative of 6 hours per day for the first 6 weeks post-operative(1-2 hours at a time) with a ROM of 0-50 degrees.[if insurance allows]

Modalities: as above.

Sports: none.

#### **Stage 3(6 weeks-10 weeks):**

ROM: as above; may remove brace if consistent with ligament stabilization protocol.

Strength: as above

Weight bearing: 6<sup>th</sup> week-50%; 7<sup>th</sup> week-75%; 8<sup>th</sup> week-100%

Modalities: prn

Sports: none

Stage 4(10 weeks-3 months):

ROM: as above

Strength: PRE-quad PRE within ROM

Weightbearing: full

Sports: none

Stage 5(3 months and beyond):

ROM: as above

Strengthening: as above

Sports: progress through graduated running program such as “functional rehabilitation program”

Resume main sports if patient has obtained near full ROM and has obtained at least 80% of quad and hamstring strength as compared to the other extremity. Usually back to full sports by 4-5 months.

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