Complex Meniscus Repair Protocol

* Radial, root, or complex repairs

I) Weeks 0-6:

- Restrictions:
  1) Immobilizer must be on at all times when walking.
  2) Touch weight bearing (TWB) with the knee in full extension using crutches
  3) No knee flexion beyond 90 degrees

- Goals:
  1) Active ROM: 0-90 degree maximum.
  2) Reduce muscle atrophy.
  3) Reduce swelling.
  4) Quad Activation

- Anti-edema
  1) Ice/Cryotherapy multiple times during the day
  2) Limb elevation
  3) Compression with TubiGrip/TEDS
  4) Ankle pumps while icing.

- Therapy/Exercises:
  1) ROM (0-90 degrees maximum):
     a. Long sitting heel slides.
     b. Hook lying heel slides.
     c. Supine wall slides for knee flexion.
     d. Prone knee flexion.
     e. Supine knee extension with towel under ankle.
f. Prone hangs.
g. Towel calf stretches.

2) Core exercises:
a. Crunches.
b. Oblique crunches.
c. Prone superman.

3) Hip and lower extremity exercises:
a. Belt abduction isometrics.
b. Pillow adductor squeezes.
c. Advance to straight leg raises as able.
d. Gluteal sets.
e. Quad sets.
f. Hamstring sets.
g. Ankle DF and PF isometrics against crutch advancing to Theraband as comfort improves.

II) Weeks 7 to 8:

- Restrictions:
  1) D/C immobilizer
  2) Progress to weight bearing as tolerated (wean crutches)
  3) Avoid loading past 90 degrees of flexion—educate patient on chair mechanics

- Goals:
  1) Reduce effusion
  2) Full ROM
  3) Minimize hip, core and lower extremity atrophy

- Therapy/Exercises:
  1) ROM exercises:
     a. Continue with previous ROM exercises.
  
  2) Gait training:
     a. Weight shifts.
        (a) Side to side.
        (b) Forwards and back.
     b. Gait mechanics training.
        (a) High knees.
        (b) Big steps.
        (c) Side shuffle walking speed.
        (d) Single leg stance.
           (i) Advance to cushion, ½ roll, ball catches.
3) Core exercise examples:
   a. Prone plank.
   b. Side plank.
   c. Upper back six pack on ball.
   d. Supine ball rotations.
   e. Side crunch on ball.

4) Hip and lower extremity exercise examples:
   a. 90 degree flexion limit.
      (a) Isometric leg press
      (b) Bridging as able.
      (c) Standing hip Theraband in all directions.
      (d) Step up.
      (e) Mini squat.

III) Weeks 9 to 16:

   • Restrictions:
     1) No loading at flexion angles greater than 90 degrees

   • Goals:
     1) Full active range of motion
     2) No effusion
     3) Improved core and hip strength and endurance

   • Outcome measures at final evaluation:
     1) LEFS: Lower extremity functional scale.
     2) PSFS: Patient specific functional scale.

   • Therapy/Exercises: (No loading past 90 degrees of knee flexion).
     1) Weight bearing exercises:
        a. Maximize proprioceptive training:
           (a) Cushion work.
           (b) Bosu ball.
           (c) ½ roll.
           (d) Sport specific:
              (i) Ball catches.
              (ii) Ball throws.
              (iii) Stick handling.

     2) Core work examples:
a. Upper back six pack on ball.
b. Prone walk out on ball.
c. Side crunch on ball.
d. Continued plank work.
e. Back bridge single arm dumbbell fly.
f. Bridge.
g. Quadrupled hip extension.
h. Quadrupled bird dog.

3) Hip work/lower extremity work examples:
   a. Continued standing hip Theraband in all planes.
   b. Seated hip IR and ER against Theraband.
   c. 85 degree knee flexion limit
      (a) Step ups with dumbbells.
      (b) Mini lunge with dumbbells.
         (i) Two dumbbells.
         (ii) One dumbbell in either hand.
      (c) Sumo squat with weight elevated on boxes.
      (d) Wall squat with tubing valgus stress.
      (e) Hockey side lunge.
      (f) Limited range dead lift.

4) Non-impact aerobic conditioning:
   a. When walking with normal gait mechanics.
   b. Build up to 30 minutes of non-impact conditioning.
   c. Knee flexion angles do not exceed 90 degrees.
      (a) Elliptical trainer.
      (b) Stairmaster.
      (c) Standard stationary bike.

IV) 4-6 months:
   1) Initiation of return to sport program.
   2) Outcome tools
      a. LEFS: Lower Extremity Functional Scale
      b. PSFS: Patient Specific Functional Scale