Bilateral Femoral-Patellar Instability

Initial Visit

Subjective:
Patient is a 14 year old active high school athlete with complaints of bilateral knee pain. She participates in basketball, softball, volleyball and track. Knee pain started during the last basketball season. She has been working extensively on quad rehab for greater than 6 months with the athletic trainer that comes to her high school, but her father brings her in today to get another opinion in hopes of getting some relief before the fall sports season begins.

Past Medical History:
Reports no significant past medical history.

Objective:

	Left	Right
Adduction Drop Test	+	-
Extension Drop Test	-	-
SLR	80°	85°
FA IR	70°	65°
FA IR Strength	4-/5 (TFL active)	4+/5 (glute med active)
FA ER	45°	50°
FA ER Strength	4/5	4/5
Hruska Adduction Lift Test	3/5	2/5
Standing Reach Test	2 inches	2 inches

Assessment:
Patient presents in a Left AIC pattern (the left ilium is anteriorly tipped and forwardly rotated). The patient would benefit from left posterior capsule inhibition to allow her to shift into left AF IR. Secondary to the position of the pelvis and her inability to shift to the left, her current femur positioning and lack of pelvic femoral control is causing increased torque on her knees. The patient will benefit from improved sagittal, frontal, and transverse positioning and neuromuscular retraining. The patient has decreased iliofemoral stability in the left hip and would benefit from left gluteus medius activation.

Treatment:

1. *90-90 Hip Shift with Hemibridge and Balloon (2nd Edition CD: Integration - Supine #6)*
    - Emphasis was placed on left AF IR with activation of the left hamstring, left ischiocondylar adductor and right quad.

2. *Left Sidelying Foot Toward Ceiling with Un-Resisted Right Glute Max (2nd Edition CD: Integration – Sidelying #9)*

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- Emphasis was placed on activation of the right glute max and left ischiocondylar adductor to improve frontal plane control while maintaining left thoracic abduction.

3. *Retro Stairs (2nd Edition CD: Left Gluteus Medius – Standing #5)*
    - Emphasis was placed on left posterior capsule inhibition with active left AF IR.

Second Visit (2 weeks later)

Subjective:
No knee pain with ADLs, but has not tried going back to playing softball or volleyball yet.

Objective:

	Left	**Right**
Adduction Drop Test	-	-
Hruska Adduction Lift Test	4/5	4/5
Standing Reach Test	To the floor	To the floor

Assessment:
Improved Hruska Adduction Lift Test bilaterally indicates improved lumbo-pelvic positioning and control; ready to advance to standing HEP. Left FA IR is still increased and indicates the need to continue with left posterior capsule inhibition and incorporate left glute med activity.

Treatment:
1. *Left Sidelying Left Flexed Adduction with Right Extended Abduction and Left Abdominal Co-Activation (2nd Edition CD: Integration - Sidelying #12)*
    - Emphasis was placed on left AF IR with activation of left ischiocondylar adductor, right glute and left abdominals while maintaining left thoracic abduction for frontal plane positioning and control.

2. *Retro Stairs (2nd Edition CD: Left Gluteus Medius – Standing #5)*
    - Emphasis was placed on left posterior capsule inhibition and maximizing left AF IR.

3. *Standing Supported Right Squat with Weighted Left Proximal Hamstring and Knee Flexion (3rd Edition CD: Right Squat #2)*
    - Emphasis was placed on right quad, left hamstring, and left ischiocondylar adductor facilitation in left AF IR position.

4. *Standing Supported Right Squat with Left Gluteus Medius (3rd Edition CD: Right Squat #4)*

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    - Emphasis was placed on right quad and left gluteus medius activation while maintaining left AF IR position with upper trunk rotation to the right.

5. *Standing Unsupported Right Squat with Resisted Left Hamstring (3rd Edition CD: Right Squat #5)*
    - Emphasis was placed on right quad control with left hamstring facilitation while extending the left lower extremity and maintaining left AF IR and right trunk rotation.

<u>Third Visit (1 month after initial visit):</u>

Subjective:
Patient reports being able to play softball and volleyball yesterday without any knee pain. Exercises are still challenging.

Objective:

	Left	Right
Adduction Drop Test	-	-
Hruska Adduction Lift Test	5/5	5/5
Standing Reach Test	To the floor	To the floor
FA IR	53°	50°
FA IR Strength	4+/5	4+/5
FA ER	55°	60°
FA ER Strength	5/5	5/5

Assessment/Plan:
Symptoms fully resolved but would like to incorporate a left squat exercise with right abduction for some left quad activity. Slightly modify program and recheck technique, then recheck in about 1 month, if patient is still doing well will D/C to HEP.

Treatment:
1. Continue *Retro Stairs (2nd Edition CD: Left Gluteus Medius – Standing #5)*

2. Continue *Standing Unsupported Right Squat with Resisted Left Hamstring (3rd Edition CD: Right Squat #5)*

3. Continue *Standing Supported Right Squat with Left Gluteus Medius (3rd Edition CD: Right Squat #4)*

4. *Standing Supported Left Squat Lateral Dips (3rd Edition CD: Left Squat #3)*

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- Emphasis was placed on left hamstring and left quad activation in left AF IR position with right extended abduction.

Final Phone Consultation:
Patient’s father called 1 month after the third visit and requested discharge; reporting that his daughter has not had any more knee pain and has returned to her very active lifestyle.

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