Unraveling the Mystery of Knee Pain #7: Clinical Applications

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Webinar Goal

To stretch and challenge your ability to think critically and further develop your assessment skills.
Logistics

- Time: 1 hour

Schedule:
- Present a scenario
- You will respond to questions I pose
- General Questions 15 mins

Pretest

1. The most important part of the assessment for patella tendon injuries comes from the (a) resisted tests, (b) passive tests, (c) active tests, or (d) history.

2. Varus stress tests for a (a) medial collateral ligament sprain, (b) lateral collateral ligament sprain, (c) medial coronary ligament sprain, or (d) lateral coronary ligament sprain.

3. Passive lateral rotation tests a sprain of the (a) medial coronary ligament, (b) lateral coronary ligament, (c) medial collateral ligament, or (d) lateral collateral ligament sprain.

4. The medial collateral ligament is contiguous with the (a) lateral coronary ligament, (b) medial coronary ligament, (c) posterior cruciate ligament, or (d) lateral patellar retinaculum.

5. Valgus stress can put pressure on the (a) lateral collateral ligament sprain, (b) medial coronary ligament, (c) lateral coronary ligament, or (d) suprapatellar bursa.

6. A loose body in the knee can cause (a) a strain of the tendon, (b) the knee to give way in a bent position, (c) bursitis, or (d) sharp unexpected pain.
Knee Webinar Clinical Applications History #1

- Try not go for the answer right away.
- Let's use our reasoning powers to go through the steps to figure these cases out.

Clinical Scenario #1

- I fell down the stairs and wrenched my left knee last month. When I climb stairs it hurts on the inner side of my knee. It swelled up like a balloon but now it’s not so swollen.
- Sometimes when I lie in bed on my right side with my knees bent to go to sleep, it hurts my knee. But when I lie on the other side its ok. I can’t squat down to pick things up without pain.
Clinical Scenario #2

On examination you notice:

- The feet are pronated and are turned out about 20 degrees in the standing position.
- Passive Flexion is painful and limited by 30°.
- Passive Extension is painful and limited by 5°.
- Valgus stress is painful medially ¾” down on the tibia.
- Passive lateral rotation is slightly painful in exactly the same place as in the above test.
Clinical Scenario #2

- Passive Flexion is painful and limited by 30°

Clinical Scenario #2

- Passive Extension is painful and limited by 5°
Clinical Scenario #2

- Valgus stress is painful medially ¾” down on the tibia

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Clinical Scenario #1

Questions:

1. What does having the feet turned out 20 degrees tell you?
2. When pain is in the medial knee what possible injuries do you think of?
3. Why did it swell? And what does the pattern of limitation tell you?
4. Why does it hurt when she squats down to pick things up?
5. When she lies in bed on her left side with her knees bent to go to sleep why does it hurt?
6. Why might it not hurt when she lies on the right side?
7. Why is lateral rotation painful in the same place?
8. What is injured? And where is it injured?
Knee Webinar Clinical Applications History #2

• I was playing soccer last weekend and two of us kicked the ball at the same time. Over the course of the day my knee started to swell. Now it's difficult to kneel down without pain. When I walk my knee feels unstable and if I try anything strenuous my knee hurts.

• Sometimes when I turn to look at something behind me it gives me a sharp twinge of pain. When that happens it gives me the feeling my leg might collapse but it doesn’t.
Clinical Scenario #2

- The Tendon Press is painful.
- Passive Flexion is painful and limited by 10 degrees.
- Passive Extension is painful but not limited.
- Passive Lateral Rotation is painful toward the inside of the knee.
- Varus Stress is painful toward the inside of the knee as well.
- The Push and Pull tests show a half inch of movement but no pain.
- Kneeling down is also painful.
Clinical Scenario #2

Passive Flexion is painful and limited by 10 degrees.

Clinical Scenario #2

Passive Extension is painful but not limited.
Clinical Scenario #2

Passive Lateral Rotation is painful toward the inside of the knee.

Clinical Scenario #2

Varus Stress is painful toward the inside of the knee as well.
Clinical Scenario #2

The Push and Pull tests show a half inch of movement but no pain.

Clinical Scenario #2

Kneeling down is also painful.
Clinical Scenario #2

- The Tendon Press is painful.
- Passive Flexion is painful and limited by 10°.
- Passive Extension is painful but not limited.
- Passive Lateral Rotation is painful toward the inside of the knee.

- Varus stress is painful toward the inside of the knee as well.
- The push and pull tests show a 1/2 inch of movement but no pain.
- Kneeling down is also painful.
Clinical Scenario #2

Questions:
1. Why did the knee swell slowly?
2. Why is passive extension painful and not limited?
3. Why does the knee feel unstable?
4. What does the push pull test tell us?
5. Why does a varus stress test cause pain on the medial side of the knee?
6. Why the sharp twinge and the feeling of collapse?
7. What is the likely injury or injuries?

Clinical Scenario #3

- I was hit by a car while riding my bike. I flipped over the handle bars and came crashing down about two months ago. My legs were all scratched up and I had bruises on my elbows and my knees. At first I seemed fine - mostly just a bruised ego because I pride myself on being very careful.

- I was amazed that I didn’t feel worse because I came down so hard on the pavement. Then my knee started to hurt more and more as I was working in the garden a few hours later. Now it is difficult to stay in a squat to plant anything. My knee feels strangely tight and painful. It gets worse and better depending on what I do. And it feels a bit hot sometimes. It hurts in the front and on the inner side of the knee.
Clinical Scenario #3

- Heat test above the knee is positive.
- Passive Flexion is painful and limited by 10°.
- Valgus Stress is painful only with the knee slightly bent.
- Varus Stress is painful.
- Passive Medial Rotation is painful.
- Resisted Flexion of the knee is painful deep inside somewhere.
Clinical Scenario #3

Passive Flexion is painful and limited by 10°.

Clinical Scenario #3

Valgus Stress is painful only with the knee slightly bent.
Clinical Scenario #3

Varus Stress is painful.

Clinical Scenario #3

Passive Medial Rotation is painful.
Clinical Scenario #3

Resisted Flexion of the knee is painful deep inside somewhere.

- Heat test above the knee is positive.
- Passive Flexion is painful and limited by 10°.
- Valgus Stress is painful only with the knee slightly bent.
Clinical Scenario #3

• Varus Stress is painful.

• Passive Medial Rotation is painful.

• Resisted Flexion of the knee is painful deep inside somewhere.

Questions:

1. How many injuries do you think there are?
2. Why did the knee hurt more gradually with gardening?
3. Why does the knee feel tight?
4. Why is it hot above the knee?
5. What does the pain during resisted flexion of the knee tell you?
6. What is injured?
Questions

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Post-test

1. The most important part of the assessment for patella tendon injuries comes from the (a) resisted tests, (b) passive tests, (c) active tests, or (d) history.

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