



The Positive Pivot Shift Test In External Rotation Predicts The Presence Of Meniscal Ramp Lesion In Patients With Anterior Cruciate Ligament Injury.

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Faculty Disclosure Information

- Nothing to disclosure

Introduction



Anterior cruciate ligament (ACL) injury is highly prevalent and its incidence is increasing



There is a wide variety of instability patterns



Each case requires adapting treatment according to each instability pattern



The pivot shift is a useful physical exam test for diagnosis of rotatory instability, classically used in ACL tears

Introduction

Purpose:

“To evaluate the relationship between the Pivot Shift Test in External Rotation during the preoperative evaluation and the presence of associated injuries determined during the intraoperative period in patients with ACL injury.”

Methods

Prospective observational cohort

Patients operated for ACL injury between July and August 2024

Inclusion



- ACL tear
- Preoperative MRI
- Preoperative assessment with Lachman and Pivot Shift Tests

Exclusion



- ACL reoperation
- Multiligament knee injury
- extension deficit that would not allow correct examination (bucket-handle meniscal tear, arthrofibrosis, etc)

Methods

Physical exam:

- Lachman Test
- Internal Rotation Pivot Shift Test
- External Rotation Pivot Shift Test

MRI evaluation:

- Evident Ramp Lesion
- Indirect signs of Ramp Lesion
- Meniscal Lesion

Intraoperative evaluation:

- Ramp Lesion
- Meniscal Lesion

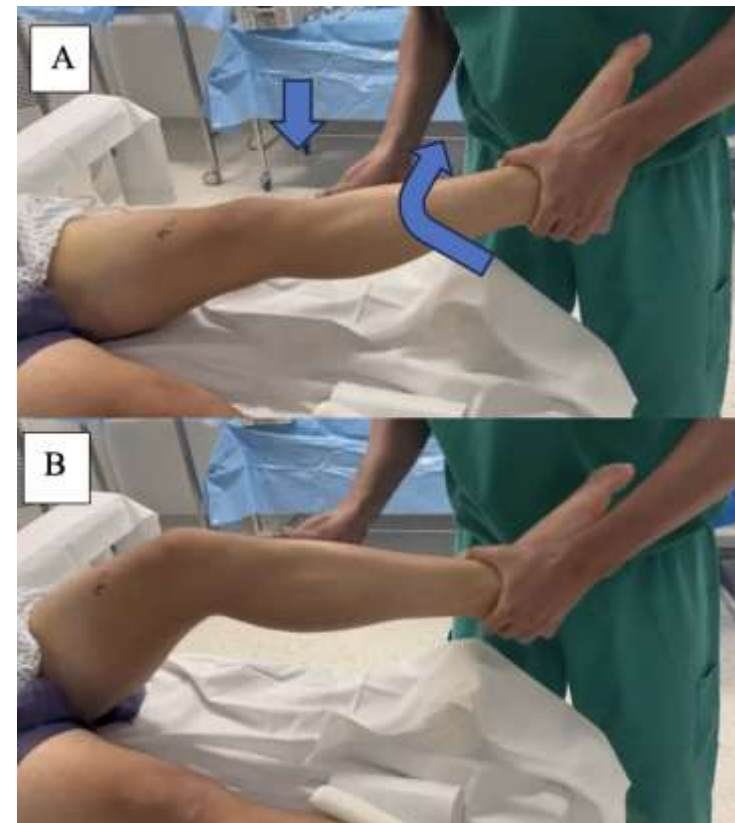


Image. External rotation Pivot Shift Test done during the preoperative evaluation.

Results

45 patients

Clinical

Lachman 100%

IR Pivot Shift
82.2%

ER Pivot Shift
55.6%

Intra-Op

Ramp Lesion
42.2%

Demographics

53.3% Male

Age Avg: 29.1

BMI 27.4



Image. Intraoperative evaluation of a Ramp Lesion through an intercondylar view and posteromedial needle.

Results

● Pivot Shift ER =
25 pts (55.6%)

68% Meniscal Ramp
Lesion Intra-op

5 (20%) another injury to
the posterior portion of the
medial meniscus

● Ramp Lesion =
19 pts (42.2%)

89.5% Pivot
Shift ER



Image. Evident Ramp Lesion observed in knee MRI.

Results

Associations

Pivot Shift ER and isolated Ramp Lesion ($p < 0.01$)

Pivot Shift ER and Ramp Lesion + injury to the posterior portion of the medial meniscus ($p < 0.01$).

Sensitivity: 89.5%
Specificity 69.2%

Sensitivity: 84.6%
Specificity 84.2%

Only 52.6% of ramp lesions were evident in the pre-op MRI
(Sensitivity 36.8%, Specificity 88.5%)

Conclusion

The positive Pivot Shift test in External Rotation suggest the presence of associated lesions in the posterior portion of the medial meniscus, especially at the level of the Meniscal Ramp, with a greater sensitivity than MRI.



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