Samaritan Health Services

THE ACL COMEBACK STORY

A PATIENT CASE STUDY

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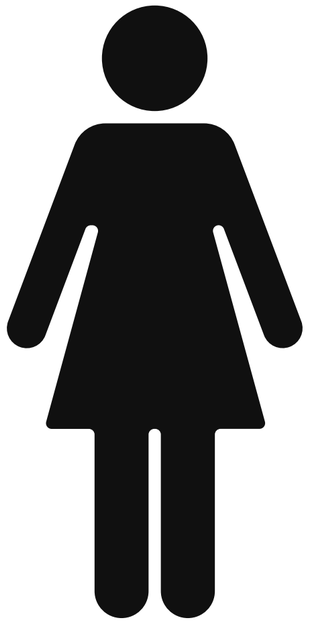
Samaritan Health Services

Purpose

The purpose of this case study was to outline the rehabilitation journey of a 36 year-old recovering S/P Left Anterior Cruciate Ligament Reconstruction with Internal Brace, LCL repair, and Lateral Meniscus debridement with additional Cyclops excision & MUA

Case Description

- **Description:** 36 y.o female S/P ACLR/LCL repair & Lateral meniscus debridement
- **Occupation**: Children's Mental Health Therapist
- **Mechanism of Injury**: Slip and fall at work attempting to restrain a client
- **Symptom Duration:** MOI Jan 2025 & Feb 2025 → Surgery June 2025
- **Imaging (MRI)**: ACL rupture, mild LCL laxity, horizontal/oblique tear of mid body/posterior horn of medial meniscus
- **Surgical outline:** ACL reconstruction (Semitendinosus allograft) w/ Internal bracing, LCL repair (Semitendinosus allograft), and lateral meniscus debridement
- **Chief Complaint**: L knee pain/weakness
- **Pain Description**: Ache
- **Past Medical History:** L shoulder labral repair 2022



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PT Diagnosis

ACL +LCL/Lateral Meniscus Injury

Body Stucture/function

Decreased (L) Knee AROM
Decreased (L) Knee Strength
(L) knee Edema

Activity Limitation

(-) Inability to weight bear
(-) pain with walking, squatting, stairs, lunging

Participation Limitatiom

(-) Inability to work
(-) Perform ADL's
(-) Inability to perform IADL's, social hobbies

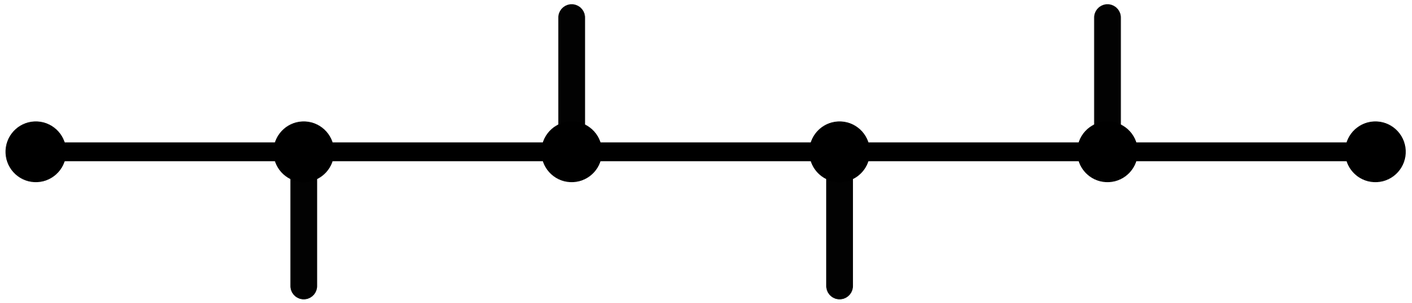
Enviormental Factors

(+/-) Support System
(-) stairs at home

Personal Factors

(-) 36 years old
(+) Employed
(+) Motivated
(-) Pain chronicity

June 2025 ACLR



Jan 2025 Initial Injury

Treatment (Pre Cyclops excision/MUA)

Phase 1-2 (week 1-6)

Manual Therapy
- Superior-inferior patella mobilization
- PROM knee flexion-extension
- Anterior-posterior tibiofemoral mobilization
- STM L hamstring/popliteus/calf

Therapeutic Exercise
- Heel slides
- Red Looping (Supine HS stretch)
- Ankle PF with resistance band
- Quad Sets/SAQ/SLR

NMES/Blood Flow Restriction training utilized week 2+

****No knee flex > 90 deg, No weight bearing, Avoid aggressive hamstring stretching****

Phase 3 (week 6-19)

Manual Therapy
- PROM knee flexion-extension
- Anterior-posterior tibiofemoral mobilization
- STM/IASTM L Hamstring/Popliteus/Quadriceps
- Cupping/MET L Hamstring

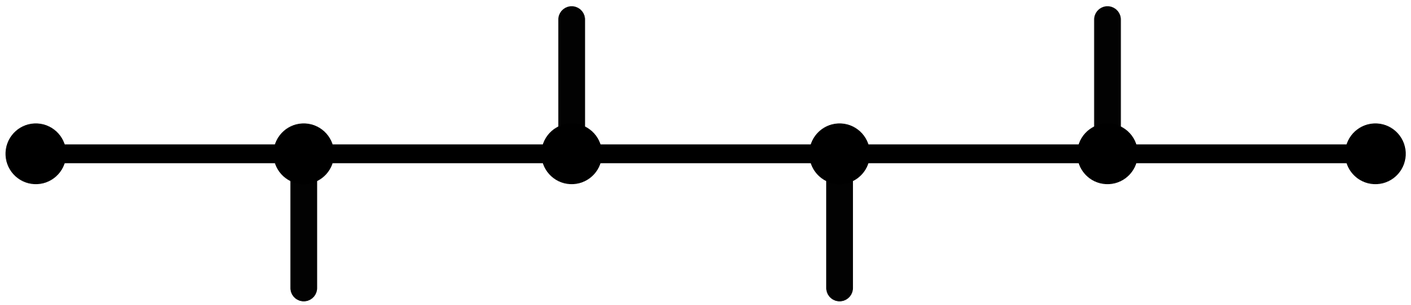
Therapeutic Exercise
- Aerobic Warm up
- Lower Extremity strengthening (emphasis on quad strengthening)
- Combination of open kinetic/closed kinetic chain exercises
- Gait Training
- Balance/Proprioception Interventions

NMES/Blood Flow Restriction training utilized

**** OKC knee extension progression 90-45 degrees wks 6-8, 90-30 degrees Wks 8-10, full ROM 10+ wks ****
****No loading in knee flexion > 90 degrees for 16 weeks****

Not All Progress is Linear

June 2025 ACLR



Jan 2025 Initial Injury

Aug-Oct 2025 Limited/Pain w/ Knee Ext

Differential Diagnosis

Infrapatellar Contracture Syndrome

Cyclops Lesion/Arthrofibrosis

Hamstring Contracture

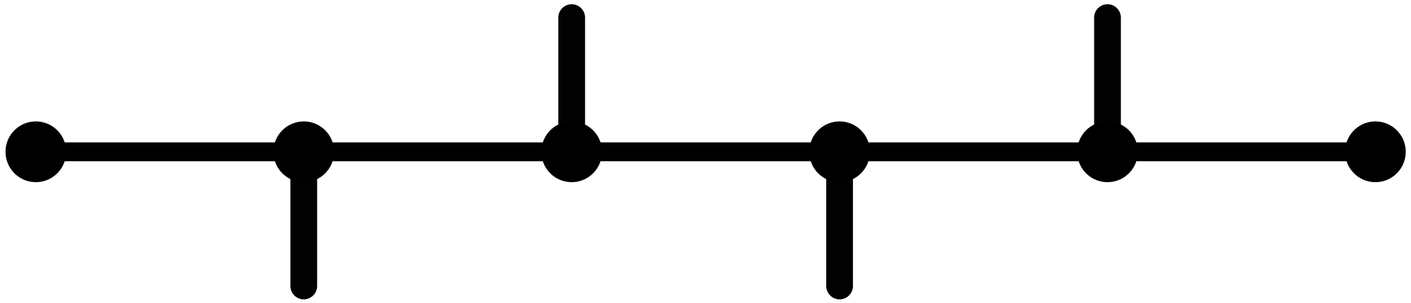
Fat Pad syndrome

Medial Plica Syndrome

Medial Meniscus Pathology

Not All Progress is Linear

June 2025 ACLR



Jan 2025 Initial Injury

October 2025 Cyclops Excision with lysis of adhesion/MUA

Background

- 80k-250K Anterior Cruciate Ligament injuries yearly in the U.S
- Two of the most common multiligament knee injuries involve the MCL and the ACL, and the posterolateral corner (PLC) and the ACL or the PCL.
- The incidence of cyclops syndrome has been reported to be between 1% and 10% of all ACLRs, where as MRI have reported an incidence of 25% to 47%
    - Incidence increased from 25% at 6 months after ACLR to 33% by the end of 1 to 2 years, whereas reported a 46.8% incidence by 1 year of which only 10.6% of cases were symptomatic.

Logerstedt et al., 2017

Kambhampat et al., 2020

Cyclops Lesions

Classification	Pathology	Presentation
Classic (Tibial)	Cyclops	Asymtpomatic
Atypical (Midsubstance)	cyclopoid	Asymptomatic
Inverted (Femoral)	Psuedocyclops	Symptomatic

Kambhampat et al., 2020

Cyclops Lesions

Risk Factors		
Female sex because of narrow notch	Increased volume of graft in relation to the notch size	Bony avulsion of anterior cruciate ligament (ACL) from tibia
Bony avulsion of ACL from femur	Anterior placement of tibial tunnel	Double-bundle ACL reconstruction because of higher volume of graft
Bicruciate-retaining arthroplasty because of ACL injury or sharp tibial bone island	Hamstring contracture	

Kambhampat et al., 2020

Cyclops Lesions

Prevention
• **Delaying ACLR until after recovery of ROM** • Minimally invasive surgery compared with open ACLR • Creating less debris by use of a sequential reamer and thorough removal of debris • Correct tunnel positioning • For cyclops lesion associated with bicruciate-retaining arthroplasty, selective fiber releases of the ACL, rounding of the edges of the tibial bone island, and notchplasty • Notchplasty if associated with impingement of the ACL graft • If possible, drawing the graft from the femoral tunnel first into the tibial tunnel to draw debris into the tibial tunnel • **Early postoperative mobilization** • Debridement in and around the bone tunnel • Trial extension with the reamer or drill placed through the tibial tunnel to check whether it impinges with the notch

Kambhampat et al., 2020

Treatment (Post cyclops excision/MUA)

Week's 1-3

*21 wk's post operative

Manual Therapy
- Superior-inferior patella mobilization
- PROM knee flexion-extension
- Anterior-posterior tibiofemoral mobilization

Therepuedic Exercise
- Heel slides
- Red Looping
- Supine Calf Stretch
- Ankle PF with resistance band
- Quad Sets/SAQ/SLR
- Terminal Knee Extension w/ resistance band

Week's 3+

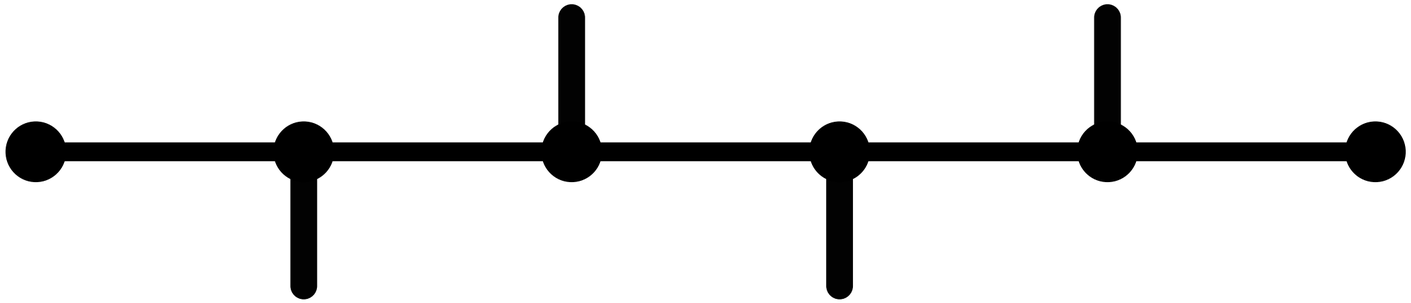
*24+ wk's post operative

Therapeutic Exercise
- Gait Training
- Balance/Proprioception Interventions
- Aerobic Warm up
- Combination of open kinetic/closed kinetic chain exercises (quad/hamstring empahsis)
- Progressive Lower Extremity strengthening (emphasis on return to work ie deep knee flexion/squat, lunging, stairs, Q-ped/Tall kneeling)

NMES/Blood Flow Restriction training utilized

June 2025 ACLR

March 2026

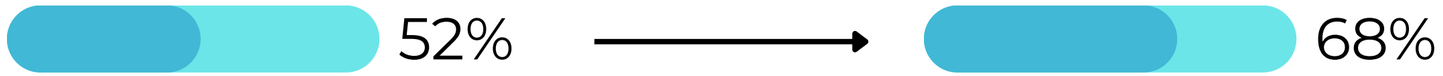


Jan 2025 Initial Injury

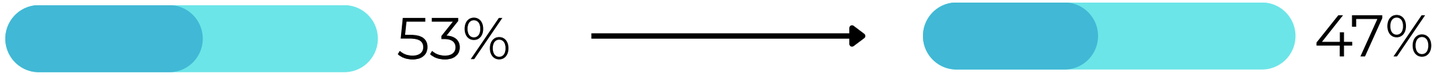
October 2025 Cyclops Excision with lysis of adhesion/MUA

Benchmark testing

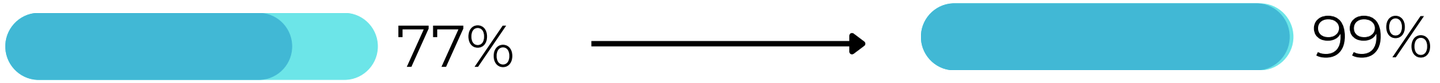
Isometric (Tindeq) Strength Testing



International Knee Documentation Committee



Y Balance Assessment



1 RM Leg Press

Right	Left
170 lbs	130 lbs
LSI: 76.5%	

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THANK YOU

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