



# Peroneal Nerve Palsy Following Lateral Meniscus Repair Complication in an Adolescent Patient: A Case Report

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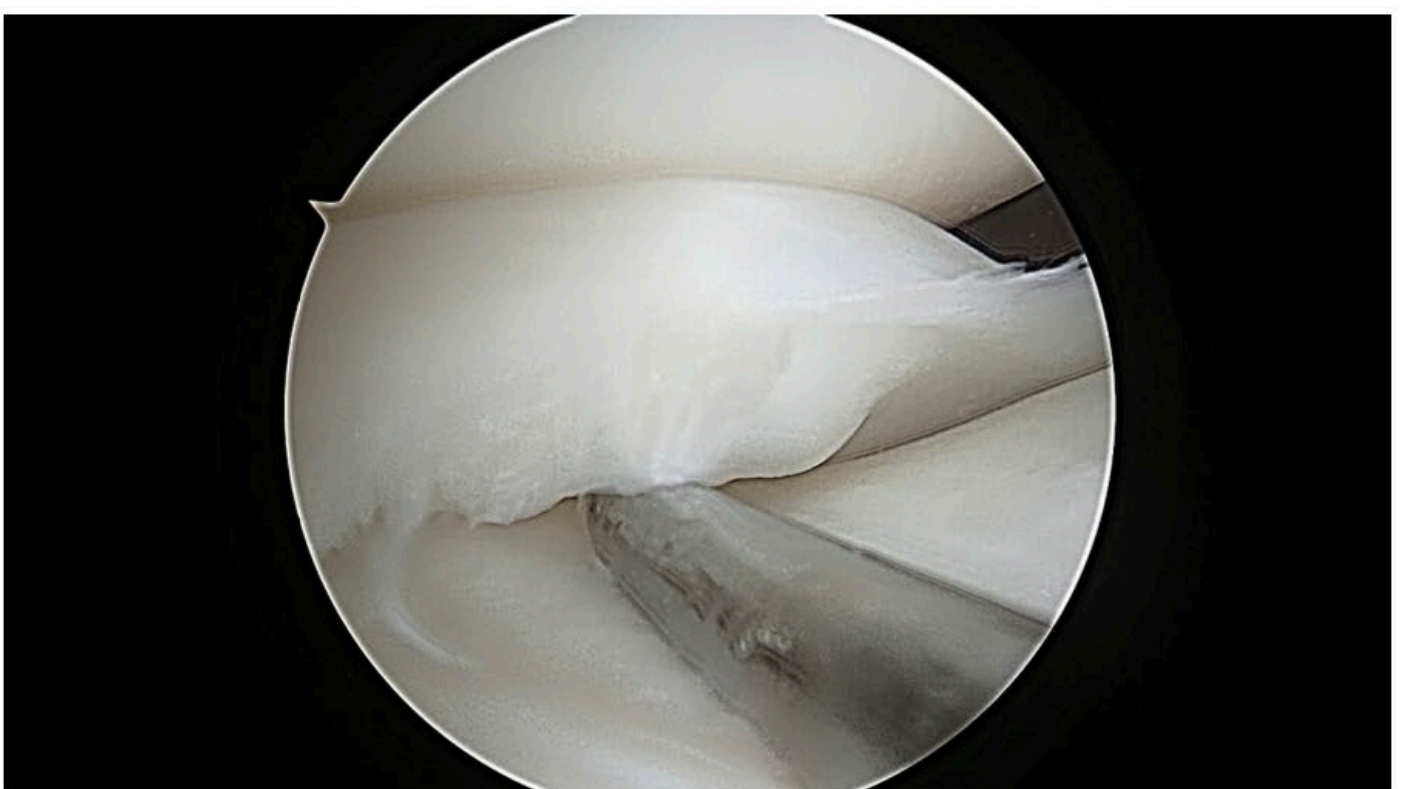
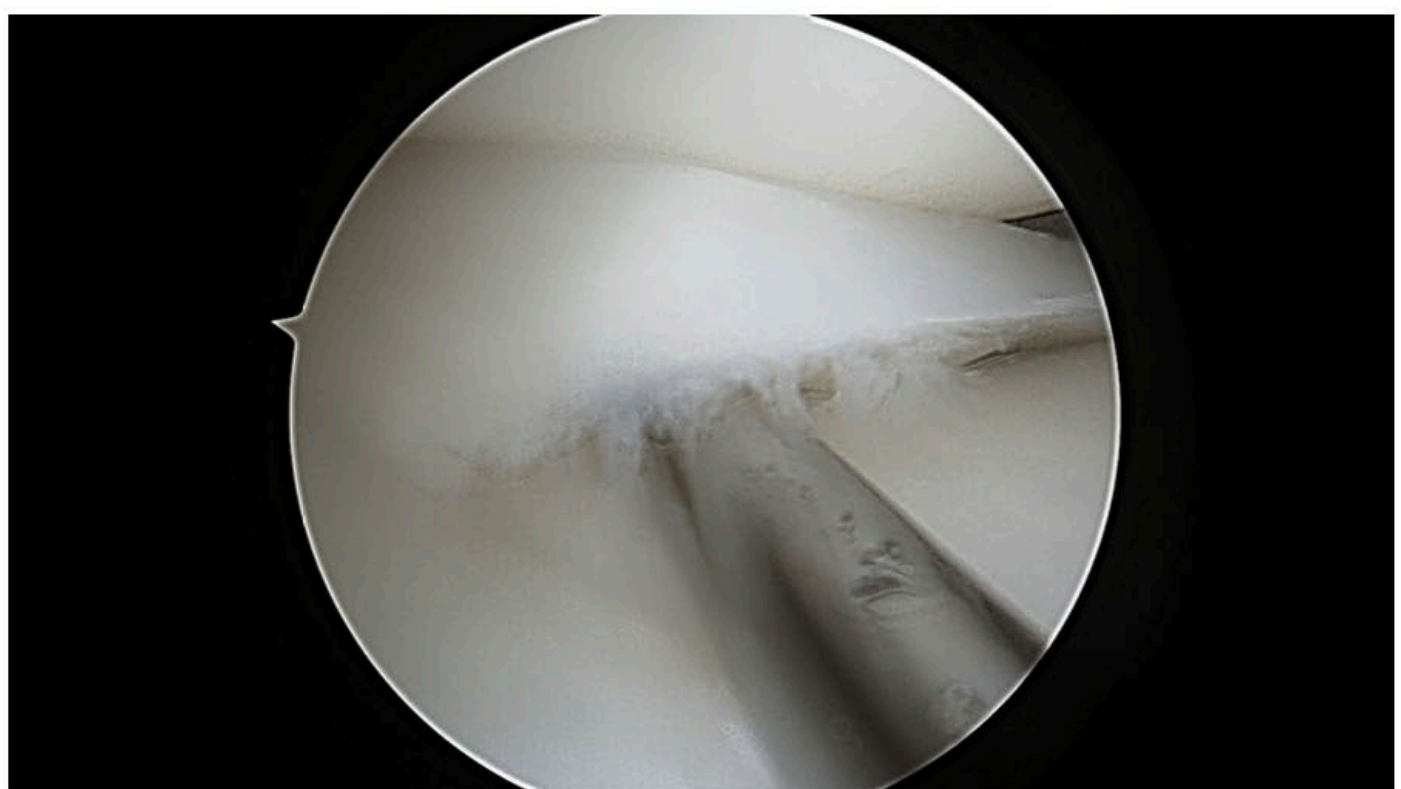
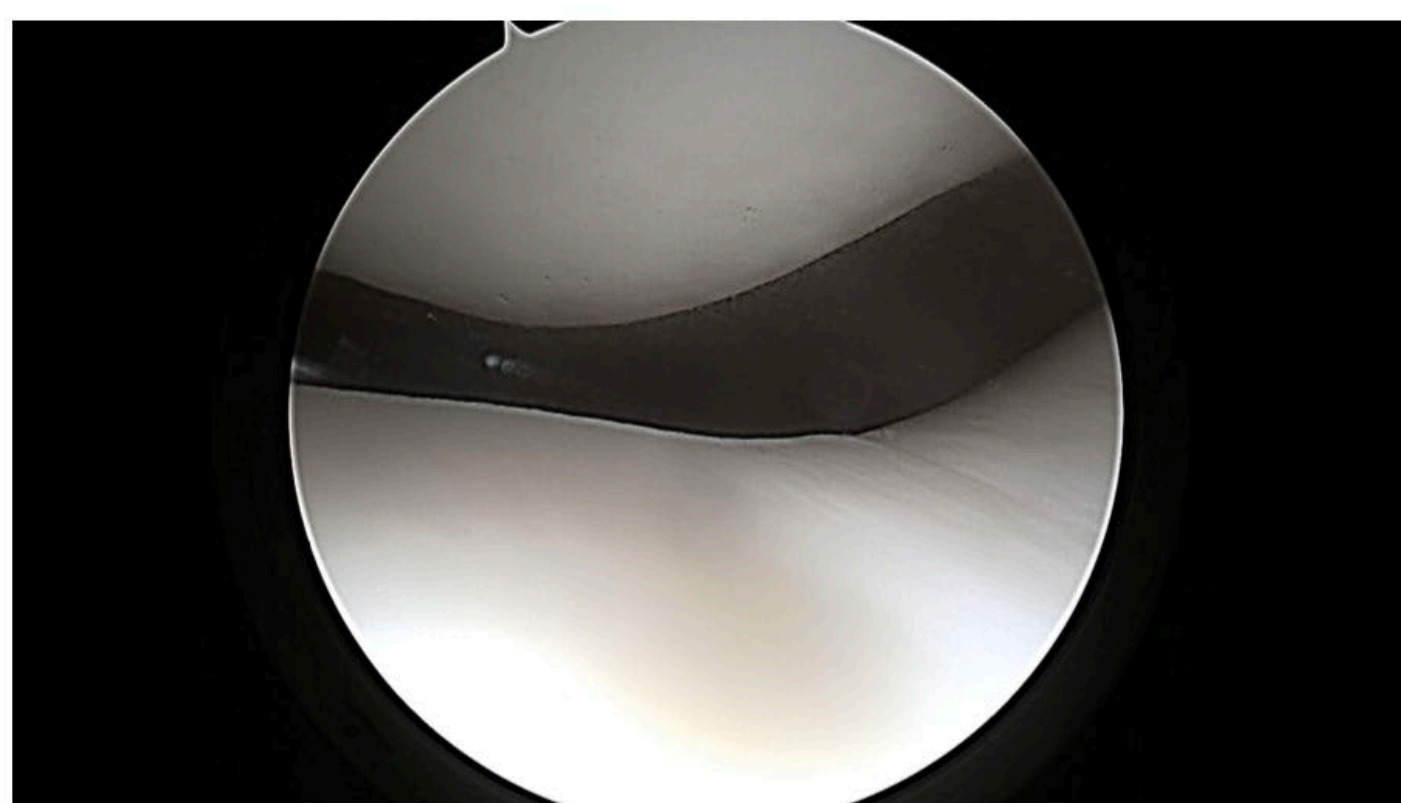
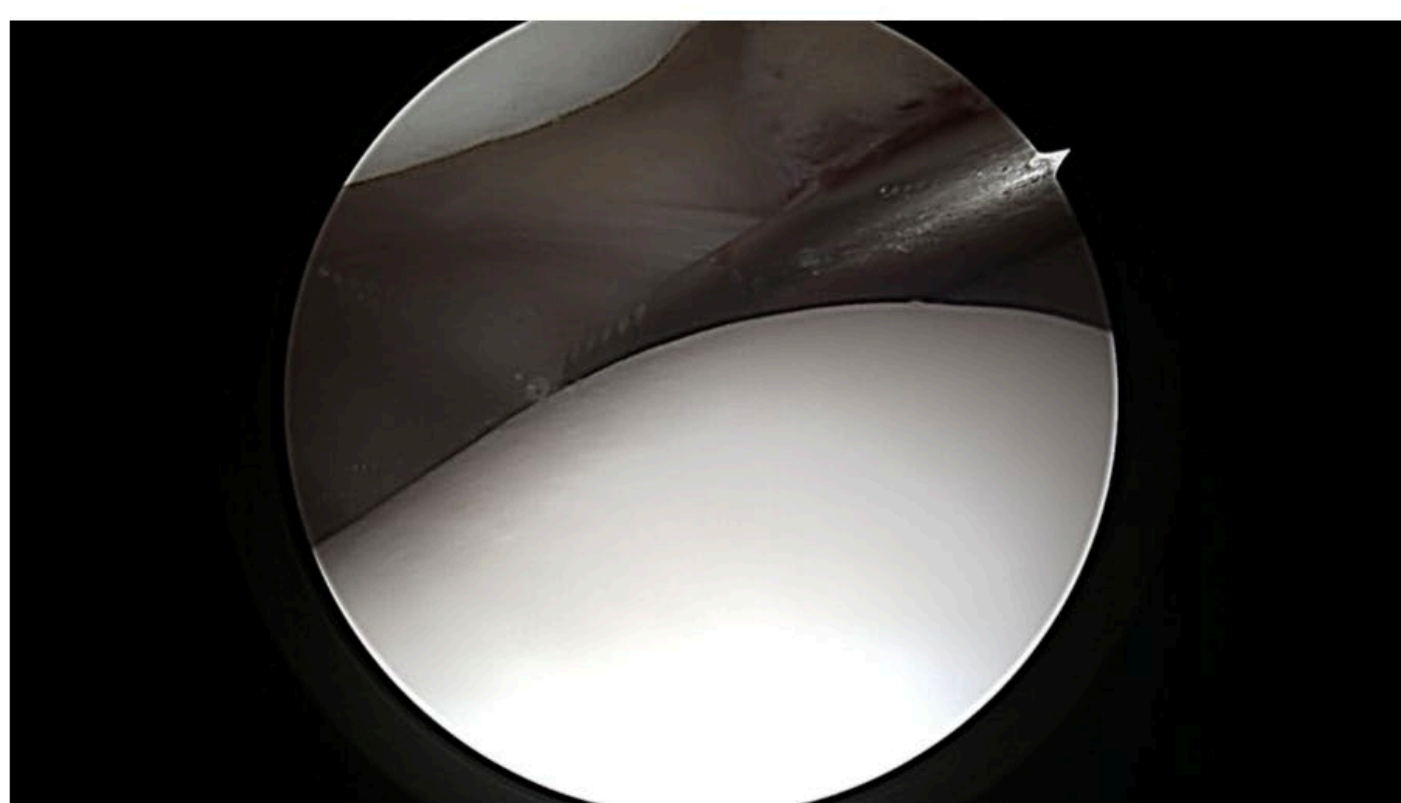


## BACKGROUND

- **Knee arthroscope:** a surgical procedure performed by using a camera and small surgical tools to repair structures in the knee. More than 58,000 per year.
- Common **complications:** infection, saphenous and **peroneal nerve palsies**, deep vein thrombosis, and pulmonary embolisms
- Damage to common peroneal nerve can result in peroneal nerve palsy resulting in **motor and sensory deficits**.
- Common peroneal nerve innervates the tibialis anterior, extensor digitorum, extensor hallucis longus and peroneus tertius muscles

## CASE PRESENTATION

- **17-year-old female** presented to an outpatient clinic 1 week post **right lateral meniscus repair** resulting in unilateral foot drop and sensory deficits from the anterior-lateral thigh down to the dorsum of the foot.
- Complaints: right **knee pain**, **decreased** range of motion and **strength** in right lower extremity, right **foot drop**, and **numbness and tingling** down the lateral portion of her leg and dorsum of her foot.



## INTERVENTIONS

Goal: **Increase range of motion (ROM)**, strength of lower extremity and **restore** normal **gait** mechanics

### Range of motion (ROM)

- Heel props
- **Passive Range of Motion**
- Half circles on stationary bike



Image by: Physiotutors

### Neuromuscular re-education

- Russian current (NMES and FES)
- **Neural mobilization** biasing the peroneal nerve



Image by Semantic Scholar:

### Strength

- Long Arc Quads (LAQ)
- Mini squats
- Seated pistol squats
- **Box squats**
- Leg press
- Squats with Pilates reformer



### Gait Training

- Gait training with crutches and AFO
- **Anti-gravity treadmill AlterG®**



## RESULTS

### Active and Passive Range of Motion Scores

		Left (Initial)	Right (Initial)	Right (Re-eval)
Knee flexion	AROM	0-130°	4-60°	0-110°
	PROM	0-136°	4-65°	0-127°
Ankle DF	AROM	0-20°	0°	0-8°
	PROM	0-22°	0-19°	0-20°
Ankle Eversion	AROM	0-13°	0°	0-2°
	PROM	0-15°	0-12°	0-12°

### Manual Muscle Test (MMT) Scores

	Left (Initial)	Right (Initial)	Right (Re-eval)
Ankle Dorsiflexion	5/5	0/5	3-/5
Ankle Eversion	5/5	0/5	1/5
Great toe flexion	5/5	2+/5	3+/5
Great toe extension	5/5	1/5	3/5
Knee flexion	5/5	3-/5	4/5
Knee extension	5/5	3-/5	4-/5

## LIMITATIONS

- Lack of outcome measures to objectively quantify patient progress.

## DISCUSSION

- This case report suggests that **physical therapy interventions** such as Russian electrical stimulation, strength training, gait training and neural mobilization techniques can **improve function and mobility** following a complication resulting in peroneal nerve palsy.
- This case report brings awareness to the effectiveness of physical therapy interventions with this population.

## REFERENCES

