

# Live surgery -8

- Case: Post traumatic common peroneal nerve palsy with right side
- Procedure: Tibialis posterior tendon transfer right foot



# BRIEF HISTORY

## Right foot

- 20 yr /Male
- history of RTA on 19-04-24 (1 year back)
- Injury to **right** knee which was associated with pain, swelling and inability to walk normal
- His right foot drags on the ground when he tries to brisk walk and loss of sensation over the dorsum of **right foot**
- Underwent CPN exploration at local hospital on 14.05.24
- Intra-op (14/05/24) – Contusion of peroneal nerve at level of knee joint, No transection
- Waited 9 months for nerve recovery
- Now came with persistent symptoms

## Right foot

- Patient denies any Bowel or Bladder problems
- No h/o any other major trauma/ Surgery to Spine.
- No h/o Leprosy, Diabetes, other major medical /surgical illness

# Clinical Examination

Right foot

## General Examination

- Conscious and oriented to time, place and person
  - Average built, normal nutrition with BMI of 24kg/m<sup>2</sup>
  - Gait: Walks with high stepping gait
- 
- No pallor, oedema, clubbing, lymphadenopathy

# LOCAL EXAMINATION

## Right lower limb

- Attitude:
  - Hip joint is neutral.
  - Knee joint has slight varus deformity.
  - Ankle plantar flexed and inverted. (Foot drop deformity)
- Scar of previous surgery on antero-lateral aspect of upper part of leg.
- Muscle wasting of right leg.
- Skin over dorsum of foot: hair loss , dry and shiny.
- Nails: brittle



# Local Examination

## **Motor:**

- Tone & Power of all muscles supplied by CPN are decreased
  - Toe Extension 0
  - Toe Flexion 4+
  - Ankle Eversion 1
  - Ankle Inversion 4+
  - Ankle Dorsiflexion 0
  - Ankle Plantarflexion 5
- 
- Leg Circumference: Right = 26cm , Left = 29.5cm



# Local Examination

**Sensory:** Loss of sensation of lateral side of **right leg** and dorsum of foot

Fine/crude touch: Lost

Pain : Lost

Joint Sense and Vibration sense: Intact

## **Reflexes:**

Plantar, Ankle, Knee – Normal

Tinel's Sign: tingling sensation present over previous injury site below knee joint

# NEUROLOGICAL EXAMINATION

- Sensation – decreased over the dorsum of right foot
- Motor System
  - Bulk: On Inspection – Wasting of right leg muscles
  - Tone – Normal
  - Power

# MRC Grading

Joint	Muscle	Right	Left
Hip	Flexors	5/5	5/5
	Extensors	5/5	5/5
	IR	5/5	5/5
	ER	5/5	5/5
Knee	Flexors	5/5	5/5
	Extensors	5/5	5/5
Ankle	<b>Tibialis Anterior</b>	<b>1/5</b>	5/5
	<b>Peroneus longus</b>	<b>3/5</b>	5/5
	<b>Peroneus Brevis</b>	<b>3/5</b>	5/5
	Tibialis Posterior	5/5	5/5
	Gastrocnemius	5/5	5/5
	Tendo Achilles	5/5	5/5
Toes	<b>Extensor Hallucis Longus</b>	<b>1/5</b>	5/5
	<b>Extensor Digitorum</b>	<b>1/5</b>	5/5
	FHL	5/5	5/5
	FDL	5/5	5/5

# Clinical Picture



# Gait – High Steppage gait

Right foot

Right calf  
wasting



# Ankle Inversion and Eversion



# Ankle Dorsiflexion and Plantarflexion



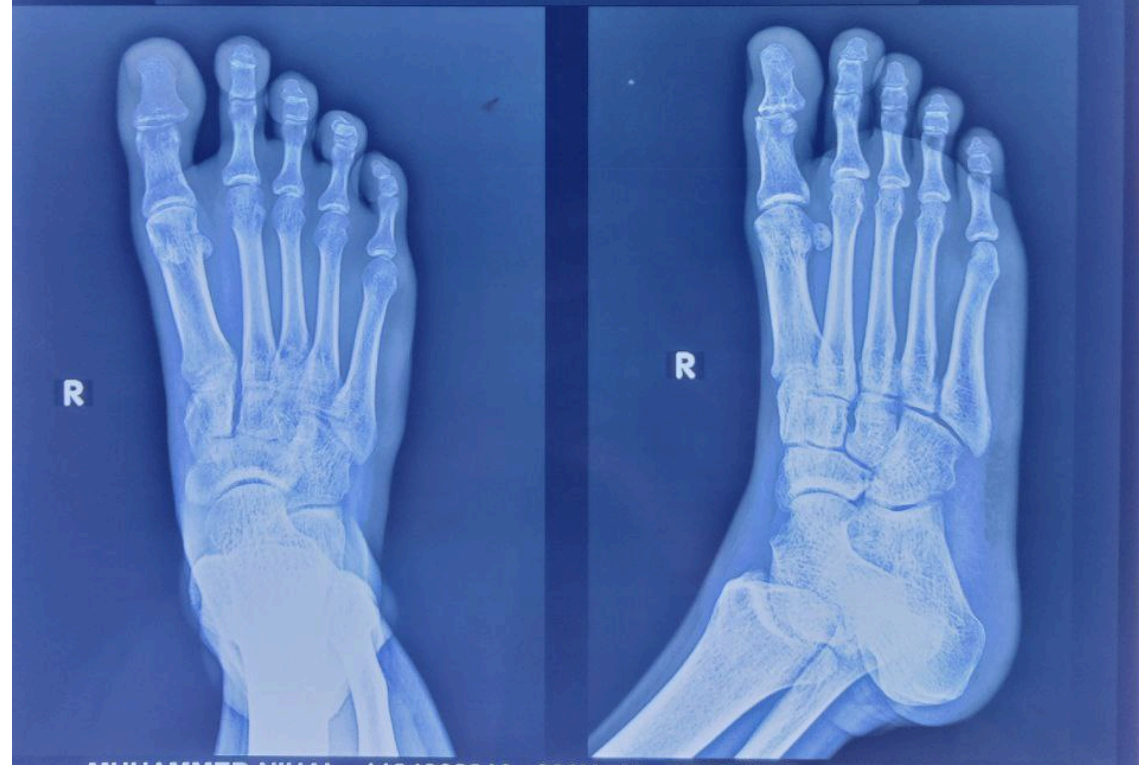
Normal Side



Affected Side



# RADIOGRAPHS - Normal



# Nerve Conduction Study

## Motor Nerve Studies

### UPPER LIMB

#### Nerve: Rt- Median

Site	Lat1 (mS)	Dur (mS)	Amp	NCV (m/S)
Wrist	2.92	12.50	18.3 mV	54.19
Elbow	6.98	12.81	18.2 mV	

#### Nerve: Lt- Median

Site	Lat1 (mS)	Dur (mS)	Amp	NCV (m/S)
Wrist	2.92	11.67	19.2 mV	58.67
Elbow	6.67	11.25	18.1 mV	

#### Nerve: Rt- Ulnar

Site	Lat1 (mS)	Dur (mS)	Amp	NCV (m/S)
Wrist	1.77	13.44	19.2 mV	52.40
Elbow	6.35	13.65	19.1 mV	

#### Nerve: Lt- Ulnar

Site	Lat1 (mS)	Dur (mS)	Amp	NCV (m/S)
Wrist	2.29	12.71	17.6 mV	57.55
Elbow	6.46	13.75	15.8 mV	

### LOWER LIMB

#### Nerve: Rt- Peroneal

Site	Lat1 (mS)	Dur (mS)	Amp	NCV (m/S)
Ankle				
Knee				

#### Nerve: Lt- Peroneal

Site	Lat1 (mS)	Dur (mS)	Amp	NCV (m/S)
Ankle	3.13	13.13	9.4 mV	41.29
Knee	12.08	12.71	9.1 mV	

#### Nerve: Rt- Tibial

Site	Lat1 (mS)	Dur (mS)	Amp	NCV (m/S)
Ankle	2.71	11.25	39.3 mV	42.15
Knee	11.25	11.46	34.5 mV	

#### Nerve: Lt- Tibial

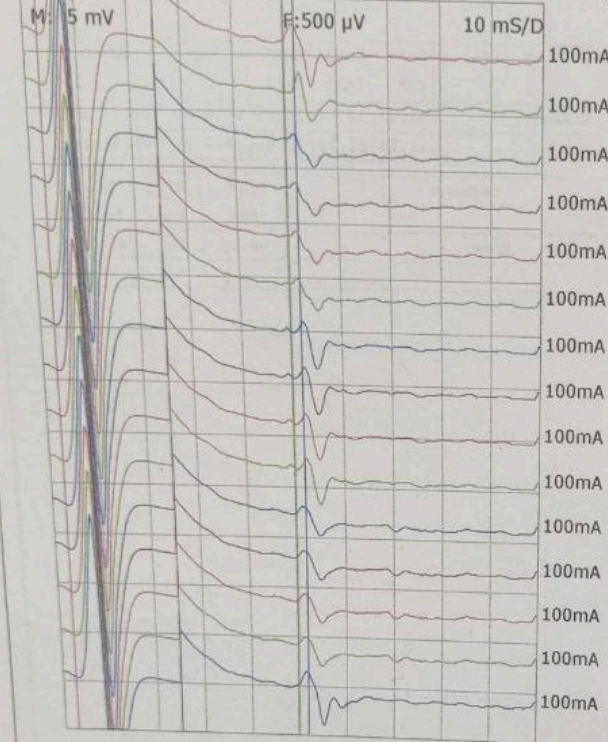
Site	Lat1 (mS)	Dur (mS)	Amp	NCV (m/S)
Ankle	2.50	13.33	35.9 mV	43.22
Knee	10.83	13.96	30.5 mV	

Rt Common peroneal  
nerve not elicitable  
elicitable.

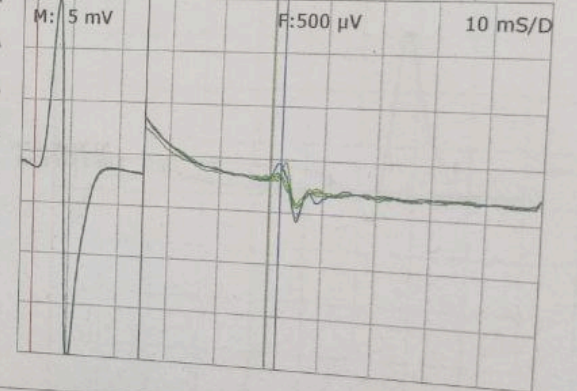
## F-WAVE RECORD

Date: 13-Mar-2023

Nerve: Rt-Tibial Nerve Rec St: Abductor Hallucis Stim St: Ankle



Nerve: Rt-Tibial Nerve Rec St: Abductor Hallucis Stim St: Ankle



M Lat	Fmin Lat	Fmax Lat	Fmean Lat	(F-M) Lat	Distance	Velocity
2.7 mS	49.8 mS	51.9 mS	50.8 mS	47.1 mS	00 mm	00.0 m/S

Test Comments

# MRI KNEE JOINT (202

ACL Sprain,  
Complete popliteus tear,  
Grade II meniscal tear of Medial  
Meniscus

Right foot

MRI RIGHT KNEE JOINT - PLAIN  
Sequences: STIR, GRE, AXL  
STIR, T1WI, COR  
T2 THIN SAG, DESS SAG.

Bony contusion at medial and lateral femoral condyle and anterior aspect of medial and lateral tibial plateau

Minimal knee joint effusion extending to supra patellar bursa.

Extensive soft tissue edema in popliteal fossa . Significant fluid at the lateral aspect of knee.

Oblique horizontal hyper intensity at posterior horn of medial meniscus extending to inferior meniscal surface- S/o Grade-II b Tear.

Grade-II intra meniscal signal intensity at posterior horn of lateral meniscus.

Mild PDFS hyper intensity in ACL fibers with out fiber discontinuity -S/o ACL sprain.

Discontinuity of popliteus tendon at myo tendinous junction with diffuse edema in the popliteal muscle with wavy popliteus tendon fibers – S/o Complete popliteus tear at myotendinous junction.

PDFS hyper intensity signals with loss of continuity of fibular collateral ligament antero lateral ligaments and biceps femoris tendon at fibular attachment -S/o Complete tear.

Wavy lateral patellar retinaculum with surrounding fluid -S/o Grade-II injury .

Lateral menisci shows normal signal intensity.

Anterior and posterior cruciate ligaments visualized in their entire length and shows normal signal intensity. Articular cartilage shows normal signal intensity.

Medial collateral ligaments shows normal signal intensity.

Patellar, medial retinacular ligaments shows normal signal intensity.

Neurovascular bundle appear normal.

IMPRESSION: Above MRI KNEE JOINT - PLAIN study reveals:

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# Plan -

- Surgeon: Dr Kamal Dureja
- Moderators : Dr Santosh Sahanand, Dr Vidhyasagar
- Case: Post traumatic common peroneal nerve palsy with right foot drop
- Procedure: Tibialis posterior tendon transfer right foot

