Subject: Anatomy II Total Marks 50

Final Term Assignment.

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Semester: DPT 2nd.

***Q:1*** *Enumerate muscles in the posterior compartment of the lower leg with clinical significances also write action and innervation of each posterior compartment muscle.*

***Q:2****Explain the following*

1. *Foot drop*
2. *Deep venous thrombosis*

***Q:3****Explain blood supply of thigh and gluteal region with the help of diagram.*

***Q 4****: Describe anatomical course, motor and sensory function of Sciatic Nerve*

***Q 5****: Enumerate Muscles of the medial compartment of thigh, what is tarsal tunnel syndrome?*

**ANS 1:MUSCLE OF THE POSTERIOR COMPARTMENT OF THE LOWER LEG**:

The posterior compartment of the leg contains seven muscles, organized into two layers – superfecial and deep.

Two layers superficial and deep separate by a band of fascia.

The posterior leg is largest of three compartment.

It invert foot.

They are inervated by the tibial nerve, a terminal branch of the sciatic nerve.

**SUPERFICIAL MUSCLES:**

**1.GASTROCNEMIUS:**

The gastrocnemiu is the most superficial of all the muscles in the posterior leg.it has two heads medial and lateral, wtich converge to form a single muscle belly.

**ACTION:**

It plantarflexe at the ankle joint and because it crosses the knee, it is a flexor three.

**INNERVATION:**

Tibial nerve

**2. PLANTARIS:**

the plantaris is a small muscle with a long tendon, which can be mistaken foe a nerve is it descends down the leg. It is absent in 10% of people.

**ACTION:**

Its flexor there

Not vital muscle for these movement

**INNERVATION:**

Tibial nerve

**3. SOLEUS:**

It soleus is located deep to the gastrocnemius. It is large and flat, named soleus due to its resemblance of a sole – a flat fish.

**ACTION:**

Plantarflexe the foot it ankle joint

**INNERVATION:**

Tibial nerve

**DEEP MUSCLE:**

**1. P0PLITEUS:**

**ACTION**

Leterally rotates the femur on the tibia

Unlocking the knee joint

Flexion

**2. TIBIALIS POSTERIOR:**

**ACTION**

Invert the planter flexes the foot

Maintain medial arch of foot

**INNERVATION:**

Tibial nerve

**3. FLEXOR HALLUCIS LONGOUS:**

**ACTION**

Flexes the great toe

**INNERVATION:**

Tibial nerve

**CLINICAL SIGNIFICANCE**

When calcaneal tendon rupture indicate complete tear of tendon

Calcaneal tendinitis chronic inflimation of tendon

Injury occur during force full plantarflexion of foot

Treatment are not surgical.

**ANS 2.**

**DEEP VEIN THROMBOSIS:**

Formation of blood clots ina deep vein

Comman in leg or pelvic

**SYMPTEMS:**

Swelling

Redness

Enlarged vein

**TREATMENT:**

Anticoagulation

**2. FOOT DROP:**

Foot drop is a gait abnormallity in which the dropping of the forefoot happens due to weakness, irritation or demage to the common fibular nerve including the sciatic nerve, or paralysis of the muscles in the anterior portion of the lower leg

**ANS 3.**

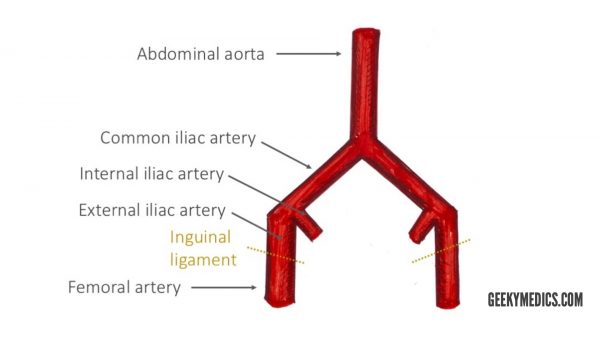
**BLOOD SUPPLY OF THIGH:**

Comes from external iliac artery

When it pass beneath the inguinal legment and enters to femoral triangle it become femoral artery

**ARTERIES OF THE THIGH:**

MCFA and LCFA and perforating beaches

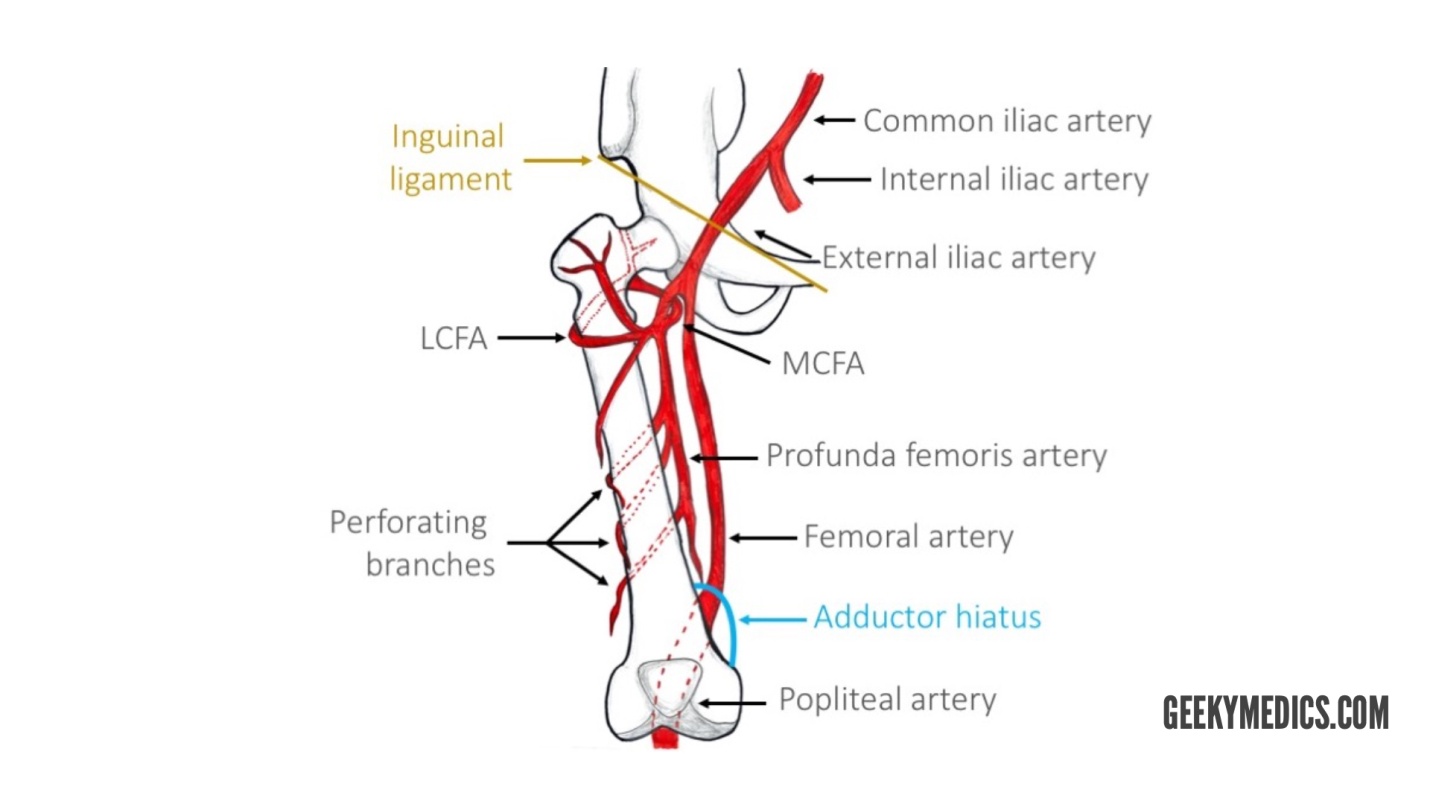


**2.GLUTEAL REGEN**

Main artery are superior gluteal and inferor gluteal

Arise from internal iliac artery

Super gluteal is largest branch of the internal iliac artery



**ANS.4**

**SCIATIC NERVE:**

The sciatic nerve is a major nerve of the lower limb. It is a thick flate band, approximately 2cm wide-the largest nerve in the body

**MOTOR FUNCTIONS:**

Innervats the muscles of the posterior thigh (biceps femoris, semimembranosus and semit endinosus) and the hmstring portion of the adductor magnus (remaing poriton of which is supplied by the obturator nerve )

**SENSORY FUNCTIONS:**

No direct senory functions in thigh regon (indirectly innervats (via its terminal branches )the skin of the lateral leg, heel,and both the dorsal and plantar surface of the foot)

**MOTOR FUNCTIONS:**

All though the sciatic nerve passes through the gluteat region, it does not inervate any muscles their.

However,the sciatic nerve does not directly inervate the muscles in the posterior compatment of the thigh and the hamsstring portion of the adductor magnus

The sciatic nerve also indirectly innervate several other muscles, via its two terminal braches.tibial nerve the muscle of the posterior leg and some of the intrinsic foot muscles common febural nerve the musles of the interior leg, leteral leg ,and the remaing intrinsic foot muscles.the sciatic nerve inervats the muscles of the posterior thigh, entire foot and entire leg .

**ANS.5**

**MUSCLES OF MEDIAL COMPARTMENT OF THE THIGH:**

The muscles in the medial compartment of the thigh or collectively known is the hip adductors. There are five muscles in this group

Adductor brevis

Adductor longus

Obturator

Adductor mangnus

Gracilis

All the medial thigh muscles are innervated by the obturator nerve,which arries from the lumbar pleus. Artial supply is via the obturator artrey

**TARSAL TANNAL SYNDROME:**

Tarsal tannal syndrome occurs due to and entrapment of posterior tiabial nerve

Pain and paresthesia in the tiabial nerve

Night pain

**CAUSES:**

Tendon sheath cyst

Post traumatic fibrosis

Thickened flexor retinaculum

Ill flittimg foot vare

In these innervations are succes full, the flexor retinaculum can be cut surgically, which releses the pressure.