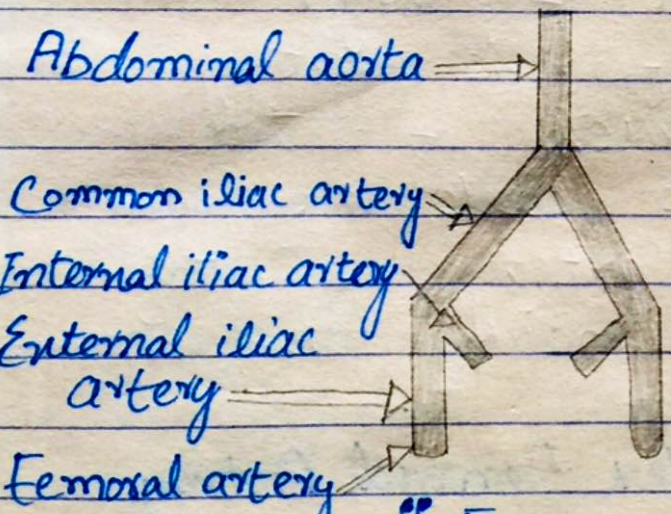
Date: 10/06/20 (1)

Name:- Asfandyar Khan
ID:- 16019
Section:- DPT 2nd (A)
Assignment:- Anatomy

"Blood Supply"

The arterial blood supply of the thigh comes directly from the external iliac artery. The external iliac artery becomes the femoral artery after it passes beneath the iguinal ligament and enters the femoral triangle.



"Femoral Triangle"

The femoral triangle is a useful anatomical landmark. This triangular depression is located inferiorly to the inguinal ligament. It is bounded by the (adductor longus muscles) medially and

the sartorious muscle laterally. Three important structures run through the femoral triangle - femoral nerve, femoral artery and femoral vein (from most lateral to medial. At the apex of the femoral triangle, the femoral artery and vein enter the adductor canal.

"Arteries of the Thigh (Gluteal Region)"

The femoral artery runs in the middle of the femoral triangle. It supplies the anterior and anteromedial aspect of thigh.

The profunda femoris artery is the largest branch of the femoral artery. This vessels are also known as deep artery of the thigh and three main branches.

Medial Circumflex Femoral Artery (MCFA)

Lateral Circumflex Femoral Artery (LCFA)

Perforating Branches.

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"Perforating Branches"

It consist of three or four arteries that perforate the addlictor magnus, contributing to the supply of the muscles in the medial and posterior thigh.

(MCFA)

Wraps around the posterior side of the femur, supplying its head and neck. Fracture of the femoral neck this artery can easily be damaged.

(LCFA)

Wraps round the anterior that perforate lateral side of the femur, also supplying some of the muscles on the lateral aspect of the thigh.

In that case addition to the femoral artery, there are other vessels supplying to the lower limb.

The main arteries of the gluteal region are the (superior gluteal) and (inferior gluteal arteries). They arise from the internal iliac artery.

The (superior gluteal artery) is the largest branch of the internal

iliac and arises from the posterior division. It has superfacial and deep branches which supplies the gluteus maximus, gluteal medius, gluteus minimus and tensor fasciae latea muscles.

The inferior gluteal artery originate from the anterior devision of the internal iliac artery. This artery supply blood to the gluteus maximus, piriformis, internal obturator, gemellus superior and inferior and quadratus femoris muscles. It alss gives off a brauch to the sciatic nerve.

"In Leg"

The popliteal artery decends down the posterior thigh, giving rise to the genicular brauches that supply the knee joint. It moves through the popliteal fossa, existing b/w the gastrocnemius and popliteus muscles.

At the lower boder of popliteus,

the popliteal artery terminates by dividing the (anterior tibial artery) and the tibioperoneal trunk. In turn the tibioperoneal trunk bifurcates into the posterior tibial and fibular arteries.

"In the Foot"

Arterial supply to the foot which is delivered via two arteries.

- Dorsalis Pedis
- Posterior Tibial

(Part B)

"Venous Drainage of Lower Limb"

The veins of the lower limb, Venous drainage in lower limb is important as venous blood has to ascends against gravity. Failure of this drainage can give rise to distension of veins (varicose veins) and limb swelling apart from other sequelea.

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"Veins of Lower Limb"

The veins may be classified into two groups.

1) "Superficial Veins"

These veins lie in the superficial fascia. On the surface of deep facia. These veins include the great and small saphenous veins and their tributaries. They lie in the superficial fascia on the surface of the deep fascia.

Superficial veins are thick-walled have smooth muscles, some fibrous and elastic tissue in their walls.

"Deep Veins"

Following veins and their tributaries are known as deep veins.

⇒ Anterior Tibial Veins
⇒ Posterior Tibial Veins
⇒ Peroneal Vein
⇒ Femoral Vein

These veins accompany the respective arteries and are surrounded by powerful muscles. These veins have

more valves than superficial veins. They are more efficient channels than the superficial veins because of the driving force of the muscular contraction.

"Deep Veins of Lower Limb"

The deep venous drainage system of the lower limb is located beneath the deep facia of the lower limb. As a general rule the deep veins accompany and share the name of the major arteries in the lower limb.

"Foot and Leg"

The main venous structure of the foot is (dorsal venous arch), which mostly drains into the superficial veins. Some veins from the arch pentrete deep into leg which forms (Anterior Tibial Vein).

On the planter aspect of the foot, medial and lateral (planter)

veins arise. These veins combine to form (posterior tibial and fibular veins.). On the posterior surface of the knee, the anterior tibial, the posterior tibial and fibular veins unite to form the popliteal vein.

"Thigh"

Once the popliteal vein has entered the thigh, it is known as femoral vein which is present anteriorly. The deep vein of thigh is the other main venous structure in thigh. It drains blood from the thigh muscle. The femoral veins leaves the thigh by running underneath inguinal ligament.

"Gluteal Region"

This region is also drained by (Inferior and superior gluteal veins) which empty into (internal iliac vein.)

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"Superficial Veins of Lower Limb"

The superficial veins of lower limb run in the (subcutaneous tissue). Two major superficial veins called (Greater Saphenous and Small Saphenous Vein)

The greater saphenous vein is formed by the dorsal venous arch of the foot and dorsal vein of the great toe. It ascends up the medial side of the leg, which passed interiorly to (medial malleolus) at the ankle. As the vein moves up the leg receives tributaries from other small superficial veins.

The great saphenous vein terminates by draining into the femoral vein immediately inferior to the (inguinal ligament). The great saphenous vein can be harvested and used as a vessels in coronary artery bypass.

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"Small Saphenous Vein"

The small saphenous vein is formed by the dorsal venous arch of the foot. And the dorsal vein of the little toe. It moves up the posterior side of the leg, passing posteriorly to the lateral malleolus, along the lateral border of calcaneal tendon. It moves between the two heads of the gastrocnemius muscle and empties into the popliteal vein in popliteal fossa.

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"Anatomical Course of Femoral Nerve"

The femoral nerve is the largest branch of the lumber plexus. It is derived from the anterior rami of nerve roots L_2, L_3 and L_4. After arising from the lumber plexus, the femoral nerve travel inferiorly through the psoas major muscle of the posterior abdominal wall. It supplies branches to the iliacus and pectnious muscles prior to entering the thigh.

The femoral nerve than passes underneath the inguinal ligament to enter the femoral triangle. Within the triangle, the nerve is located lateral to the femoral vessels. (Unlike the vessels/nerve, the femoral artery and vein are enclosed within the femoral sheath.

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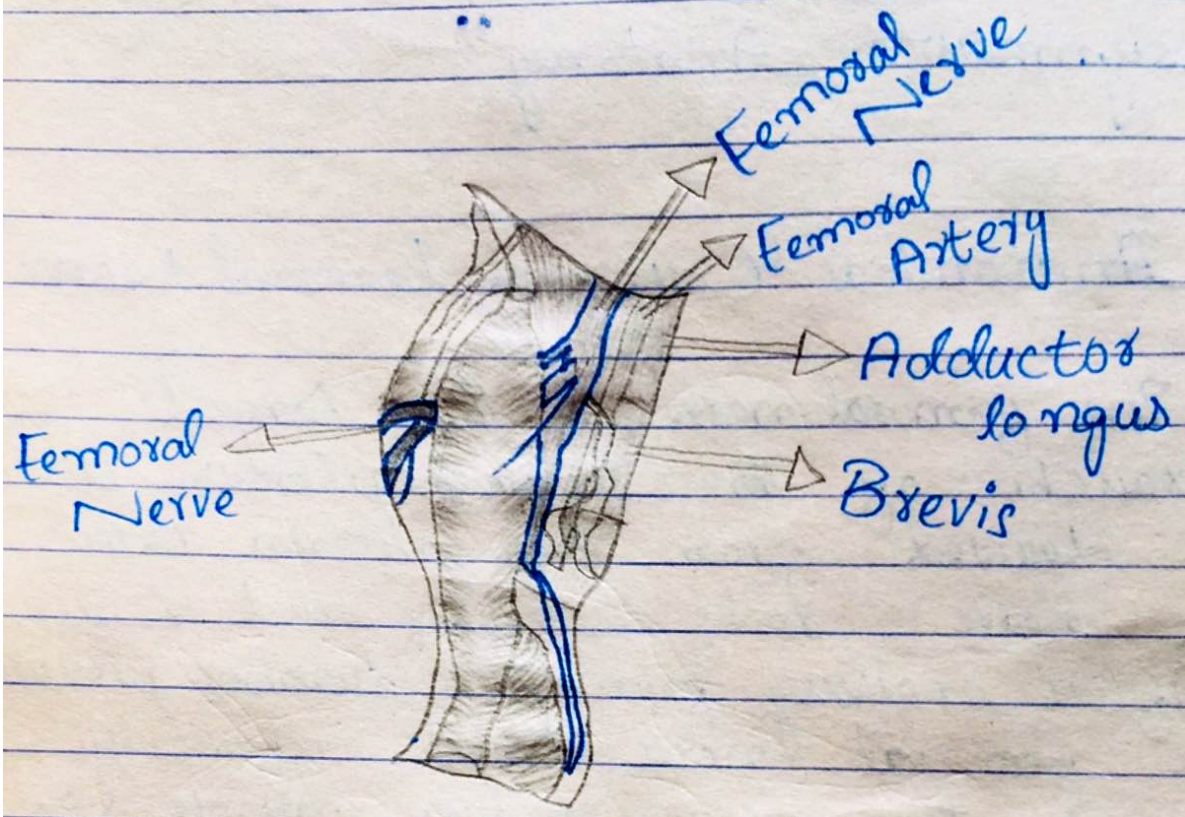
"Diagram of Femoral Nerve"



"Anatomical Course of Sciatic Nerve"

The sciatic nerve is derived from the lumbosacral plexus, After its formation, it leave the pelvis and enters the gluteal region via sciatic greater formation. It emerges inferiorly to the pisiformis muscle and decends in an inferolateral direction.

As the nerve moves through the gluteal region, it crossess the posterior surface of the

superior gemellus, obturator internus, inferior gemellus and quadratis femoris muscles. It then enters the posterior thigh by passing deep to the long head of the biceps femoris.

Within the posterior thigh, the nerve gives rise to branches to the hamstrings muscles and adductor magnus. When the sciatic nerve reaches the apex of the popliteal fossa. It terminates by bifurcating into the tibial and common fibular nerves.

Sciatic nerve can be described as two individual nerve bundled together in the same connective tissue sheath the tibial and common fibular nerves. These usually seperate at the apex.

(Diagram is on the next page)

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Diagram of Sciatic Nerve: