MUSCULOSKELETAL SYSTEM

<ANATOMY>

<MUSCLES OF THIGH>

DONE BY: SHADY SOGHAYR
the thigh can be classified to four compartments, anterior, medial and posterior.

there is only one septum in the thigh which is the lateral intermuscular septum.

the deep part of the glutes maximus is inserted in the lateral intermuscular septum.

there is another separation of connective tissue but it is thin.

Anterior compartment
Mainly innervated by the femoral nerve.
The compartment function is to make flexion of the hip joint or extension of the knee joint.

1- pectenius muscle
Small muscle, a bit deep.
Can be classified with the medial compartment of the thigh (position and function) because it makes adduction but the doctor put it here because it is innervated by the femoral nerve.

2- iliopsoas muscle = iliacus muscle + psoas major muscle (because they have one joint tendon).
Crosses the hip joint anteriorly (so its function is to flex the hip joint).

Pass inferior to the inguinal ligament.
The iliopsoas muscle reaches the lower limb by basing in the gap between the ingoinal ligament and the hip bone.
The iliopsoas muscle is considered the major flexor of the hip joint.
To remember the function of the sartorios muscle remember the Definition.
(رجل على رجل)

So flexion of the hip and flexion of the knee and abduction of the femor and a bit of rotation to it.

The sartorius is the most superficial muscle in the anterior compartment.

The quadreseps femores is the major extensor of the knee.

The rectus femores can help in the flexion of the hip joint.

Quadreseps femores is composed of 4 muscles that share one tendon.

The action of the quadreseps femoris is through the patella and then the patellar ligament.

The articular muscle is attached to supra pateller bursa and is considered a part of the vastus intermedius muscle(something we are suppose to know).

Most of the medial compartment of the thigh is innervated by the obturator nerve(except hamstring part of the abductor magnus).

The function of the medial group is adduction.

Adductor longus(pectinus in the same level) > adductor brevis > adductor magnus (ordered from the most anterior in the superior part).

The adductor magnus has adductor part and a hamstring part.

The adductor hiatus is the opening that transfers vital structures from the anterior thigh to the popletial fosa.

The obturator externous resembles the external boundaries of the obturator foramen.
The femoral triangle is a region in the upper and anterior part of the thigh, which is a depressed area.

The femoral triangle is located between the inguinal ligament which is the superior boundary, sartorius muscle as the lateral boundary and, adductor longus as the medial boundary.

The floor of the femoral triangle is the iliopsoas muscle and pectineus muscle (the iliopsoas muscle is anterior to the pectineus muscle).

The vital structures enter the thigh by passing between the inguinal ligament and the superior ramus of the pubis.

These vital structures are from lateral to medial (femoral nerve > artery > vein > lymphatics).

The blood vessels and the lymphatics enter through a structure called the femoral sheath (part of deep fascia).

Muscle fascia contributing to the formation of the femoral sheath:

Anteriorly is the transversus abdominis muscle.

Posteriorly is the iliacaus muscle.

The femoral sheath is found only in the upper part of the femoral triangle.

Septi in the end of femoral triangle separating its structures:

1. longus septum between the vein and the lymphatic vessel (forms the femoral canal which contains the lymphatics and is the most medial part and its superior opening is called the femoral ring).

The femoral ring makes the medial border of the lacunar ligament (which is the inferior part of the inguinal canal).
Hernation can occur in the inguinal canal and in the femoral canal.

The adductor canal starts from the inferior angle of the femoral triangle and ends in the adductor hiatus.

The adductor muscles boundaries:
1. Anterior and medial is the sartorius muscle
2. Posterior by the adductor magnus and adductor longus.
3. Laterally by the vastus medialis muscle.

The adductor canal contains the femoral artery and vein and, the end branch of the femoral nerve (saphenous nerve).

The femoral artery and vein enter the adductor hiatus at the end of the adductor canal but the saphenous nerve doesn’t.

We can know the place of the femoral artery by the palpation in the femoral triangle.

The femoral artery is midway between the anterior superior iliac spine (ASIS) and pubic symphysis.

If you do a flexion against resistance in the leg it will be easy to locate the biceps tendon and the tendon of the semitendinosus which are the boundaries of the popletial fossa.