

Q23 Describe and/or illustrate the anatomy relevant to the insertion of an arterial line into the femoral artery (March 2010)

Femoral triangle (aka Scarpa's triangle):

- Bordered by Sartorius (lateral), the inguinal ligament (superior) and adductor longus (medial)
- Floor: iliopsoas laterally, pectineus medially
- Roof: fascia lata
- Contains (lateral to medial) the femoral nerve, artery, vein, and lymphatics.

Femoral sheath:

- Situated within the triangle.
- Formed from the fusion and invagination of the psoas and transversalis fascia.
- Contains femoral artery, vein and tributaries, and femoral canal

Femoral artery: main artery of the lower limb, originates as a continuation of the external iliac artery at the level of the inguinal ligament.

Course:

- Enters the femoral triangle deep to the midpoint of the inguinal ligament (clinically the femoral pulse is usually found midway between the ASIS and pubic tubercle), lateral to the femoral vein
- Passes through the triangle and exits at its apex, entering the adductor canal (Hunter's canal)
- Exits the adductor canal by passing through the adductor hiatus in adductor magnus (at the level of the junction between the middle and lower third of the thigh) to become the popliteal artery.
- Several branches – largest is profunda femoris, the chief artery to the thigh, which arises from the lateral aspect of femoral artery, 2-5cm below the inguinal ligament. Other branches include the superficial epigastric, superficial iliac circumflex and superficial and deep external pudendal arteries.

Relationships:

- Medial – femoral vein (upper part of the triangle)
- Lateral – femoral nerve, lumboinguinal nerve
- Superior – inguinal ligament
- Posterior - posterior part of femoral sheath, pectineal fascia, psoas major tendon, pectineus and adductor longus
- Anterior – skin, superficial fascia lata, lymph nodes, anterior part of femoral sheath