Adductor canal

• Also named as Hunter’s canal

• Present in middle one third of thigh medially deep to sartorius muscle

• Extends from apex of femoral triangle to adductor hiatus
• Boundaries - Anterolaterally vastus medialis
• Posteriorly adductor longus above & adductor magnus below
• Medially Strong fibrous membrane deep to sartorius.
• Subsartorial plexus present in roof consists of medial cutaneous nerve of thigh, saphenous nerve & anterior division of obturator nerve
Contents

• Femoral artery
• Femoral vein
• Saphenous nerve
• Nerve to vastus medialis
• Antr. Division of obturator nerve
• Subsartorial plexus of nerves
Applied

- Femoral artery easily approached here for surgery
- Ligation of femoral artery is done in femoral canal. Collateral circulation is established thru anastomosis between Descending branch of lateral circumflex femoral & descending genicular arteries, between $4^{th}$ perforating artery & the muscular branch of popliteal artery
Medial side of thigh

- Compartment between medial & ill defined posterior intermuscular septum
- Also called as adductor compartment as muscles cause adduction of hip joint
Contents

• Muscles- Adductor longus
  Ad.brevis, ad magnus, gracilis. Pectineus, obturator externus

Nerve – obturator nerve

Vessels- medial circumflex artery, profunda femoris artery & obturator artery

Vein- obturator vein
Origin & insertion of muscles
Pectineus

- **Origin:** Superior ramus of pubis, pecten pubis & pectineal surface
- **Insertion:** Posterior aspect of the femur on a line passing from lesser trochanter to linea aspera
- **Nerve supply:** Femoral, obturator nerve. May derive from accessory obturator nerve
- **Action:** Adductor & flexor of thigh at hip joint
Adductor longus

- **Origin**: from front of the body of pubis
- **Insertion**: Posterior aspect of middle one third of femur between vastus medialis & adductor brevis
- **Nerve supply**: ant. division of obturator nerve
- **Action**: Adduction, flexion & lateral rotation of thigh
Adductor brevis

- **Origin**: lower part of body & inferior ramus of pubis, lateral to that of gracilis
- **Insertion**: Posterior part of femur along a line passing from lateral trochanter to linea aspera, upper part of linea aspera
- **Nerve supply**: Obturator nerve
- **Action**: adduction & flexion of thigh at hip joint. Also a lateral rotator of thigh
Gracilis

- **Origin**: body of pubis, inferior ramus of pubis & ramus of ischium
- **Insertion**: upper part of the medial surface of tibia
- **Nerve supply**: Obturator nerve
- **Action**: Flexion of leg at knee joint, Medial rotation of leg & week adductor of thigh
Adductor magnus

- **Origin**: Ramus of ischium lateral to origin of gracilis
- **Hamstring part**: from inferolateral part of ischial tuberosity
- **Insertion**: medial margin of gluteal tuberosity, linea aspara & into medial supra condylar line. Hamstring part in to adductor tubercle
- **Nerve supply**: obturator & sciatic nerve
- **Action**: adduction & extension of thigh, also cause lateral rotation of thigh
Obturator artery

- Branch of antr. Division of internal iliac artery
- Enters the medial compartment thru obturator canal
- Divides into antr. & postr. Division. These form anastomosis & circle the margin of obturator membrane
- Branches also anastomose inf. gluteal & med. Circumflex vessel
- Post division gives acetabular branches
Profunda femoris artery

- Deep branch of femoral artery
- Main arterial supply for the muscles of thigh
- Gives of
  - lateral circumflex vessel
  - medial circumflex vessel
- Three perforating arteries
Medial circumflex artery

- Arises from profunda femoris artery
- Passes backwards to supply all the muscles
- Terminal transverse branch takes part in cruciate anastomosis posterior to ad. Magnus
- Ascending branch takes part in trochanteric anastomosis
Obturator nerve (L234)

- Branch of lumbar plexus
- Passes thru the pelvis lying along its lateral pelvic wall
- Enters medial compartment of thigh by passing thru the adductor canal
- As it enters in to thigh, it divides into antr. & postr. branch
- Postr. Division supplies obturator externus, adductor brevis & part of adductor magnus. Articular branch to the knee joint is given.

- Antr. Division supplies adductor longus, gracilis, adductor brevis, pectineus & hip joint, enters ad. Canal, forms a plexus & supplies medial side of thigh.
Accessory obturator nerve-L34, present in 30% subjects. Arises from lumbar plexus. It descends along medial side of psoas, then it crosses superior ramus pubis in to thigh. It may end at hip joint or pectineus or may replace part of obturator nerve

Accessory Obturator artery-Arises from inferior epigastric artery and crosses the abdominal aspect of lacunar ligament