

SUBJECT: ANATOMY II

MID TERM ASSIGNMENTS.

SEMESTER: DPT 2ND.

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Submit to Dr .Attaullah

Section A.

NOTE: Highlight the correct option of the given MCQs from section A. attempt all 3 questions from section B.

- **Out of the following bony landmarks to which the Ligamentous teres attached?**
 - A. intertrochanteric line
 - B. trochanteric crest
 - C. Fovea capitals**
 - D. Greater trochanter
- **Neck of the femur connects the head of the femur with the shaft. It is cylindrical, projecting in a superior and medial direction. It is set at an angle of _____ degrees to the shaft.**
 - A. 156
 - B. 170
 - C. 135**
 - D. 101
- **The proximal area of the femur forms the hip joint with the acetabulum of the pelvis. It consists of a head and neck, and two bony processes the greater and lesser trochanters. There are also two bony ridges connecting the two trochanters; the intertrochanteric line anteriorly and the trochanteric crest posteriorly. Out of all these proximal bony landmarks which one is the most lateral palpable bony landmark?**
 - A. Greater trochanter**
 - B. Lesser trochanter
 - C. The intertrochanteric line
 - D. Trochanteric crest.
- **_____ is the site of attachment for iliopsoas muscle.**
 - A. Greater trochanter
 - B. Lesser trochanter**
 - C. The intertrochanteric line
 - D. Trochanteric crest.
- **Neck of femur fractures are increasingly common and tend to be sustained by the elderly population as a result of low energy falls in the presence of osteoporotic bone. Classically, the distal fragment is pulled upwards and _____**
 - A. Medially rotated
 - B. Externally rotated
 - C. No rotation occurs
 - D. None of the above**
- **Regarding neck of the femur fracture the medial femoral circumflex artery can be damage in _____**
 - A. Intracapsular fracture**
 - B. Shaft fracture
 - C. Extracapsular fracture

- D. Femoral epicondylar fracture
- **The shaft of the femur descends in slight _____ for stability.**
 - A. Lateral direction
 - B. Medial direction**
 - C. Posterior direction
 - D. Diagonal direction
- **Mr. A met with an accident and his right femur broke at 3 different places. The cut was a clean break and the four pieces were put back together in their original place. What kind of fracture did he have?**
 - A. Contusion
 - B. Hairline Fracture
 - C. Multiple Fracture**
 - D. Simple Fracture
- **A closed femoral shaft fracture can result in _____ blood loss.**
 - A. 10-15ml
 - B. 100-150ml
 - C. 1000-1500ml**
 - D. 10000-15000ml
- **Which of the following is the medial bone of lower leg?**
 - A. Patella
 - B. Fibula
 - C. Tibia**
 - D. Medial cuboid
- **The shaft of the tibia is prism-shaped, with _____**
 - A. One border and one surface
 - B. Two borders and one surface
 - C. Three borders and two surfaces
 - D. Three borders and three surfaces**
- **The calcaneus is often fractured as a result of _____**
 - A. Distraction
 - B. Axial loading**
 - C. Walking
 - D. Setting
- **The depth of the acetabulum is raised by the _____**
 - A. Fovea captious
 - B. Capsule of hip joint
 - C. acetabular labrum**
 - D. ischial Bursae
- **The most powerful ligament of hip joint is?**
 - A. Iliofemoral ligament**
 - B. Pubofemoral ligament.
 - C. Ischiofemoral ligament.
 - D. Transverse acetabular ligament

- **The hip joint is supplied by the branches of the following arteries EXCEPT:**
 - A. Medial circumflex femoral artery.
 - B. Lateral circumflex femoral artery.
 - C. Radial artery.**
 - D. Superior gluteal artery.

Q1: Section B

Q:1 Describe Hip joint anatomy. (your answer should cover these headings, (Articular surfaces of hip joint, Ligaments of joint, Stability of hip joint, Blood and nerve supply).

ANSWER:

1. HIP joint anatomy:

it is a ball and socket synovial joint .it is consist of biggest ball in socket joint in the body.

The function of this joint standing walking, running and support the weight of all body structure stability provides to the muscle skeletal system.

2. Articular surface of the HIP joint:

The head of the femur articulate the horse shoe shaped acetabulum of the hip bone to create the hip joint .the lunate surface is cover by hyaline cartilage and is broadest superiorly.

But a small pit fovea capitates for ligament terns.

The acetabulum consist three features

Horse shoe shape lunate surface

Acetabula notch

Acetabula fossa

Just lunate surface is covered in articulate by an articular cartilage.

3.Ligament

1: capsular ligament:

- This ligament is powerful and dense fibro sac that in close the joint
- On the hip joint

Its connected 5_6 ml the ace tubular margin outer side the transverse acetabula ligament and ace tubular labrum.

- Or the former it is connected posteriorly intertrochanteric a rest and anteriorly the intertrochanteric line.
- Posterior inferiorly is thin and weakly connected.
- Antero superiorly is thick in the standing position capsule is made up two type is fibers.

Outer longitudinal
Inner circular fibers

2: Iliofemoral ligament

This ligament is in reverse y shape ligament

Which is located anteriorly and near connected with the capsule

Apex is connected to the ilium between the anterior inferior iliac spine and the margin of the acetabulum

Base is connected the and trochanteric line of the femur

It is consist three part

Oblique line

Vertical fiber

Large center thin portion

3: pubofemoral ligament

it is a triangular ligament

It is anterior inferior to the joint

Base its attached medially to the iliopubic eminence and obturator membrane

Inferiorly combine with all the anteroinferior part of the capsule .

4. ischiofemoral ligament

Reinforces the posterior part of the fibers membrane

Its attached posteriorly to the acetabulum medially to the ischium and laterally to the greater trochanter .

5. Ligament of the head of femur

This ligament is also termed ligamentum teres of the head of femur

This is a flat irregular ligament apex attach to the fovea of the head in base the transverse acetabula ligament

6. Acetabula labrum

The acetabula arum is a fibro cartilaginous rim connected to the acetabula margin its is triangular in a cross section .

4. Stability of hip joint

The firmness of the hip joint as supplied by the following factor

That event it dislocation

Three for powerful ligament

Reinforcing the capsule of the joint the strength of the surrounding muscles

Length and obliquity of the neck of the femur.

Arterial supply:

The hip joint is supplied the following branches

- Lateral circumflex femoral artery
- Medial circumflex femoral artery
- Obdurate artery
- Superior gluteal artery
- Inferior gluteal artery.

Nerve supply of the hip joint:

- Femoral
- Obdurate
- Superior gluteal nerves
- Nerve to the quadrates femora's
- Sciatic nerve

Q2. Explain the following.

A. cruciate ligament

b. Menisci

ANSWER

Cruciate ligament

There are two ligament connect the femur and tibia cross to each other.

1. Anterior cruciate ligament

It is connect at the anterior intercondyle region of the tibia

Length 38mm

Width 10mm

Origin

-posteromedial corner of medial side

-Lateral femoral condyle in the intercondylar notch

It is composed of two part

2. poster lateral portion

Clinical important

Anteromedial bundle in flexion and poster lateral bundle in extension.

Action

Anterior translation and medial rotation of tibia

2. POSTERIOR CRUCIATE LIAMENT

Tis ligament attached to the lateral surface of the medial condyle

Length 36mm

Width 13mm

Plc. and quadriceps arte stabilize partners of stabilizing the knee in the sagittal plane
It prevent posterior displacement of the tibia on the femur
The anterior cruciate can be hypertension of knee joint

Common mechanism (pcl.) damage is the (dashboard injury)

This occur when knee is flexed and large force to the shine. Pushing the tibia posteriorly this is occur in accident.

MENISCI

Menisci is c shaped ends connect to the tibia

Menisci also proved lubricating, stability and proprioception through its insertion attachments

The menisci wedge shape on cross section and many different layers of fibers which run in different angle.

The fibers orientation dictates how the menisci distributes forces and therefore how the fibers can be compromised

Cellular structure

The menisci is a stratified fibrocartilage tissue with regional different in the extracellular structure

Chondrocytes construct the extracellular matrix consisting of type, 1,2and 3 collagen and glycosaminoglycan's collagen proved elasticity and GAG proved structure but also attached water.

BLOOD SUPPLY

Red white zone at thwe border of the vascular area contents chondrocyte like cell and a limited capacity to heal.

Red-red zone is vascularized by the per meniscal capillary plexus contain fibroblast like cell and can heal

MECHANISM OF INJURY

Which can cause injury to the menisci through repetitive chronic leading .

A menisci tear is usually caused by twisting quickly .These tears can occur when you like something play sport

Can occur alongside a ligament injury ACL, MCL etc .

INJURY OF THE KNEE

Knee pain on walking, weight bearing activities, site to stand etc.

Swelling of the knee

Stiffness of the knee

Loss rune of motion

Pain with squatting

Q:3 Write down a comprehensive note on medial and lateral ligaments of ankle joint.

ANSWER:

1. Medial ligament

Is attached to the medial malleolus

Is composed of in apex connect to tip and margins of medial malleolus and a base which fan out attaching

Three tarsal bones

Talus

Naviculars bone

Calcaneus

The main of ligament is to end over eversion the foot

Medial ligament is in extremely triangular ligament in the on the medial side of the ankle compensating the shortness of the medial malleolus its separate into two part superficial and deep.

Above both connecting to the same

Below the connecting the superficial and deep both different

Superficial parts

It consist into 3 parts

Anterior fiber is connected to the tuberosity of talar bone

Medial its connect to the entire length of subtalar sulcus

Deep parts :

It connect to the anterior part of the medial surface of talus.

2. Lateral ligament

Its originate from the lateral malleolus

It is the most commonly injured ligament of the ankle

It resist over inversion of the foot

This ligament consist three separate ligament

1 Anterior talofibular ligament

Attach to the lateral malleolus to neck of talus

Function

Restrain anterior placement of the talus

Inversion and plantar flexion

2 Posterior talofibular ligament

Attach to the malleolus fossa of fibula

Function resists posterior displacement of talus

3 Calcaneofibular

Attach between the lateral malleolus and the calcaneus

Function

Dorsiflexion

Prevent talar tilt into inversion

Commonly control inversion and or supination of foot.