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Paper - Anatomy

Submitted To -

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(1)

Q NO: 1

Ans:

⇒ Structure of EYE

The Structure of eye consist of mainly three parts.

① Eye Ball.

(2) Extraocular Muscle.

(3) Bony orbit.

Each ~~and~~ and every

one is explain as following.

(2)

(1) Eye Ball

- It is Spherical in structure.
- It is bilateral.
- It is located in bony socket.
- It response for vision.

Parts of Eye ball

- (a) → Fibrous layer
- (b) → Vascular layer
- (c) → Inner layer.

(3)

(a) Fibrous layer

- It is external layer of eye ball.
- It provide support
- It maintain
Shape of eyeball.
- It is composed
of
 - (*) → Sclera
 - (*) → Cornea.

Sclera:-

- It is the white part of eye.
- It is a fibrous tissue

(u)

→ It provide attachment of muscles to eye ball.

→ Cornea :-

→ It is transparent.

→ It responsible for refraction of light.

→ Located at the front of eye.

(b) Vascular Layer

→ It is present below fibrous layer.

(5)

→ It is composed of

(*) → Choroid.

(*) → ciliary body.

(*) → Iris.

⇒ Choroid

→ It consist of
tissue and blood
vessels.

→ It provide nourishment
to retina

→ Thick in back of
eye at about 0.2mm
and narrow to 0.1mm

(6)

Ciliary body:

→ It is circular

Structure

→ It produce fluid

in eye called
aqueous humor.

→ It contain ciliary
muscles.

→ The fibers attach
to lens by ciliary
process -

(7)

Iris :-

- It is flat
- It is ring shaped membrane.
- Circular opening in center called pupil.
- It is contractile pigmented with control aperture.
- Pupil is light sensitive.

(8)

→ Inner layer

→ It is similar to film in a camera.

→ It receive light from image -

→ It convert light into electrical impulses which sent through optic nerve to brain.

→ It is light sensitive part.

(9)

(9)

Neular layer

→ It compress

photoceptor

→ that detect light

and compress of

light sensitive rod

and cone cell.

→ which lies posteriorly

and laterally.

(10)

⇒ Pigment Layer

→ It located below
neural layer.

→ It support the
neural layer.

→ It present around
the eye.

⇒ Lens of eye

→ It located in
eye.

→ It focusing the light
rays that pass
through it.

(11)

→ It create clear image of object that are positioned at various distances.

→ It is transparent lens.

→ refract light present b/w pupil and vitreous humor.

(2) Extraocular Muscles

→ The extraocular muscles are located in the eye.

(12)

→ These muscles control the movement of eyeball and eyelid.

Extracocular muscles consist of -

① Levator palpebrae.

2) Superior rectus.

3) medial rectus.

4) inferior rectus.

5) Lateral rectus.

(13)

6) Inferior oblique.

7) Superior oblique.

8) Superioris.

⇒ Eye movement

→ Six muscle that facilitate eye movement.

→ 4 - Rectus muscles: lateral, medial, inferior and superior.

→ 2 → are inferior and superior oblique.

(14)

⇒ Superior eyelid movement

→ For side movement
↳ oblique.

→ up and down movement
↳ Lacti

→ Levator and superiors.

⇒ Bony orbit:

→ It is pyramidal
in shape

→ Base anterior
and apex posterior.

→ Responsible for
encluse eye ball and

(15)

protect eyeball.

⇒ Opening to orbit

There are some
opening to orbit

which are:

- (1) orbital opening.
- (2) infra orbital groove
and canal.
- (3) optic canal.
- (4) ~~orb~~ orbital fissure

(16)

Foramen in Base of Skull:

The names of foramen which found in the base of skull are following.

- 1) Foramen caecum
- 2) Olfactory foramina
- 3) Optic canal.
- 4) Superior orbital fissure.
- 5) Foramen Rotundum.
- 6) Foramen ovale.

(17)

7) Foramen Spinosum.

8) Carotid Canal.

9) Internal acoustic Canal.

10) Jugular foramen.

11) Hypoglossal Canal.

12) Foramen Magnum.

==== xx ===== xx =====

(18)

Q No:2

ANS:

Muscles of MEDIAL
Fascial Compartment
of Thigh:

The Names of medial
fascial Compartment of
thigh are following.

- (1) Gracilis
- (2) Adductor Longus
- (3) Adductor Brevis
- (4) Adductor Magnus
- (5) Obturator Externus.

(9)

(1) Gracilis:- Muscle:-

→ It is most superficial and medial in this compartment.

→ cross both knee and hip joint.

→ Sometimes transplant to hand or forearm.

Origin of Gracilis
Muscle -

The origin of Gracilis
is.

→ Anterior body of
pubis

→ inferior pubic ramus

(20)

→ Ischial ramus.

Insertion of Gracilis
Muscle:

→ Medial surface
of proximal tibia.

→ It inserted or
attach to the medial
surface of tibia
b/w the tendons

of Sartorius (anteriorly)
and Semitendinosus
posteriorly.

(21)

ANATOMICAL POSITION

of Gracilis:

→ It found in groin.

→ Start at external
point of ischiopubic

venous and extend

down to upper

medial shaft

of tibia.

(22)

(2) Adductor Longus

Muscle:

→ It is large fan
- shape muscle.

→ Located in the
medial aspect of
Thigh.

⇒ Origin of adductor longus

The origin of adductor
longus are.

→ Body of pubis

→ inferior to pubic
crest and lateral

(23)

lateral to the
pubic symphysis.

insertion:

It inserted

→ Middle third

of linea aspera

of femur.

→ This insertion of

adductor of tongue

lies vertically on

adductor magnus and

near the femur

→ Adductor braui's interpose

(11)
(24)

blw these two muscles.

→ Distally adductor longus extend into adductor canal.

(3) Adductor Bravus

→ It is the muscle of thigh situated immediately deep to pectineus and adductor longus.

→ It pull thigh medially.

(25)

⇒ Origin of adductor

Praevia Muscle :-

It is originated from.

→ Anterior surface
of inferior ramus

→ And Body of
pubis.

Insertion :-

The adductor

Praevia muscle

is inserted in

lesser trochanter
and linea aspera of femur.

(26)

→ This valve insertion
is located on upper
third to the femur.

→ medial to insertion
of adductor magnus.

→ lateral to insertion
of pectineus muscle.

(4) Adductor Magnus

Muscle ::

→ It is largest
and strongest muscle
of medial compartment

(27)

→ It is situated
in both in

Posterior and medial
fascial compartment.

origin of adductor

magnus muscle:

It is originated from

(*) → The adductor part

is from → pubic
ramus.

→ Ischial ramus.

(*) → Ischiocondylar part

from → Ischial

tuberosity.

(28)

⇒ Insertion of

Adductor Magnus
Muscle:-

→ The adductor part
is inserted into
gluteal tuberosity
and linea aspera
and medial supra-
condylar line.

→ The ischiocondylar
part → adductor
tubercle of femur.

(29)

→ Superior portion.

→ pass obliquely
insert upper part
of linea aspera.

and insert medial
margin of gluteal
tuberosity.

→ Inferior portion

→ It originate from

ischial ramus and

inserted into linea

fashion of along

entire length of linea.

(30)

aspera. and upper
part of supracondylar
line.

(5) Obturator Externus Muscle:-

→ It is located
in pelvis on
anterior aspect of
innominate bone.

→ Cover obturator
foramen.

→ located deep to
pectenius and superior
part of adductor of thigh.

(31)

Origin of ~~ob~~turator

Externus Muscle.

It is originated from

→ anterior surface of
obturator membrane

→ Bony boundaries
of obturator foramen.

Insertion:-

It is inserted in

trochanteric fossa

of femur.

== KX == KX ==

(3Q)

Q1103

Ans.

→ External Laryngeal
Nerves:

→ The external laryngeal
nerves anatomy
show that the
external laryngeal nerves
is one of two branches
of the Superior
laryngeal nerve.

→ which is the
branch of Vagus nerves.

(31)

Origin of Laryngeal nerve

→ It is originated

as the smaller

branches of Superior

Laryngeal nerve. at

level of hyoid bone.

→ inferiorly it

passes with carotid
sheath.

→ Posterior to Common
Carotid

→ Then anteromedially
to superior thyroid
artery.

(35)

→ It supply few motor fibers to cricothyroid part.

Effect of injury of external laryngeal nerve.

→ External branch of Superior laryngeal nerve is motor nerve to cricothyroid muscle.

→ its defective result in lowered voice frequency.

→ $ultra^a$ are?

(36) ^(u) ~~(36)~~

→ Fatigue.

→ lowered voice
projection.

→ Don't have the
ability to achieve
sound of high
frequency.

→ weakness ~~in~~ of
voice. ~~in~~

→ weakness of voice
is due to injured

of external laryngeal
nerve. Therefore it
produces weakness
in voice. and

~~is~~ also due to
~~the~~ cricothyroid muscle
is paralyzed and

(37)

Vocal fold cannot
be tensed.

Facial nerve.

→ The facial nerve is
one of group of
nerves called the
cranial nerves.

→ It is the 7th
paired of cranial
nerve.

→ It controls muscle
of facial expression.

→ It also controls

the taste and
sensation two-third
of tongue.

(38)

Examination of facial nerves.

→ For test facial
nerves:-

→ The facial nerves
supply motor
branches to muscle
of facial expression.
is therefore tested

by
→ asking patient
to crease up
their forehead.

→ Close their eyes.

(7)
(39)

and keep them

close against

resistance.

→ Puff out their

cheeks.

→ Reveal their teeth.

→ Observe for ~~any~~

even wrinkling.

== x x == x x ==

(40)

Q No 4

Suture of Skull.

Meaning of Suture

→ Latin word.

"Sutura" means

"A Sewn Seam"

Definition of Suture

→ Suture is type of fibrous joint that is found in the skull.

(41)

→ Bones are bound together by Sharpey's fibers.

→ These joints may be fixed, immovable.

→ They have no cavity.

→ Completely fuses at 20 yrs of age.

Types of Sutures

→ Four ^{types} Sutures are located in skull which are.

(42)

- ① Coronal suture.
- ② Sagittal suture.
- ③ Squamous suture.
- ④ Lambdoid suture.

① Coronal suture

→ It separate

frontal ~~bone~~ and

parietal bone.

→ the suture
decrease in size

- at birth and
allow skull to
become smaller.

(43)

→ It is dense fibrous connective tissue.

→ It enable the skull to expand with rapidly growing brain.

→ Coronal suture may close prematurely on one side or both sides. When this happen it's called coronal synostosis.

(uu)

(2) Sagittal Suture

It is dense fibrous
connective tissue

Joint b/w the
two parietal bones
of skull.

→ The sagittal and
lambdoid sutures
converge into lambda.

(3) Squamous Suture

→ It joint the
parietal bone and
temporal bone.

(45)

(4) Lambdoid
Sutures:

→ It is dense connective
~~tissue~~ fibrous tissue

→ It connect the
parietal bone with
occipital bone

→ Trigeminal Nerves

→ It is the fifth
paired cranial
nerves.

→ It is largest cranial
nerves.

(46)

Origin of trigeminal
nerves:

→ It is originated
from three sensory
nuclei and motor
nuclei.

→ It extend from
mid brain to
medulla.

Nuclei:-

→ Collection of neuron.
→ cell bodies within
the CNS.

(47)

→ It transmitting

Sensory information

→ Stimulate movements.

⇒ Peripheral aspect
of trigeminal nerves

→ Peripheral aspect
of trigeminal nerves

form given five rise.

→ It consist of

Three division.

① → Ophthalmic (V₁)

2) → Maxillary (V₂)

3) → Mandibular (V₃) -

(48)

(1) Ophthalmic nerve

→ It give rise

to three terminal
branches:

(a) → frontal

(b) → lacrimal

(c) → Nasociliary.

→ It supplies structures

that are:

(a) → Skin of forehead.

(a) → Scalp-

(*) → frontal

(*) → Ethmoid sinus.

(49)

→ Cornea.

→ Dorsum of nose.

→ Conjunctiva.

⇒ Branches of ophthalmic nerves

(i) Nasociliary nerve.

(ii) Lacrimal nerves.

(iii) Frontal nerve.

(i) Nasociliary nerve

→ It is a branch of ophthalmic nerve.

→ It is intermediate size b/w frontal and lacrimal.

(50)

→ Secondary nerve of eye.

(ii) Lacrimal Nerve

→ It supply to
conjunctiva.

(iii) frontal nerve

→ It convey sensory
information to

→ Skin

→ upper eyelids.

→ side of nose.

(51)

Maxillary Nerve

→ It consist of
branches which
innervates the
skin, mucous membrane,
and derivatives of
sinus.

→ Prominence of
1st maxillary arch.

→ Conjunctiva.

→ Lower eyelids

→ Cheeks.

→ Upper lip.

→ Maxillary sinus.

(10)

(52)

(c) Mandibular nerve:-

→ It consist of terminal
branches in infra-
temporal fossa.

→ inferior alveolar
nerve.

→ temporal nerve

→ Lingual nerve.

→ It supplies to

(A) → External ear.

(A) → lower lip

(A) → mucous membrane.

(A) → Chins.

(53)

Q No 5

Spinal Cord

Definition:-

A part of central nervous system located in spinal canal

that conveys the information b/w

Brain and periphery.

Location of Spinal Cord

It is located in

the vertebral

canal of vertebral column.

(54)

Shape of Spinal Cord

The Shape of Spinal
~~Spinal~~ Cord.

→ when viewed
from inside

Adult spine has
natural S-Shape.

Curved.

→ Lumbar and Cervical
region slightly concave.

→ Thorax and Sacral
region convex curve.

(55)

⇒ Size of Spinal cord

The Spinal cord
is approximately

→ 40 - 50 cm long.

→ 1 cm to 1.5

cm in diameter.

⇒ Anatomical position
of Spinal cord.

→ Spinal cord extend
from foramen

magnum where
it is continuous

(56)

with medulla to
the level of first
or second lumbar
vertebrae.

It is important

link b/w Brain
and body. and

from body to

Brain.

(57)

(A) Dura matter

→ It is outermost matter.

It has two layers.

(1) periosteal.

(2) meningeal.

(A) Arachnoid matter

→ It is underneath.

(A) Pia matter ::

→ It is the deepest

(58)

Structure of Spinal - Cord :-

Spinal cord is made
up of gray and
white matter.

→ Gray matter

→ It is butterfly
shape.

→ Central part of
Spinal cord.

→ It show anterior,
lateral and posterior
horns.

(59)

White matter

→ It surrounds the gray matter.

→ made up of axon.

→ It provide pathway that connect brain with rest of body.

⇒ Spinal cord and spinal nerves roots are wrapped within three layers called meninges.

(60)

→ Subarachnoid Space

→ The space b/w
arachnoid and
pia matter called
Subarachnoid Space.

→ It filled with
called Cerebrospinal
fluid.

⇒ Segments of Spinal
Cord:

The Spinal cord
consist of segments
which are follow.

(61)

- (1) Cervical \rightarrow 8 pairs.
- (2) Thoracic \rightarrow 12.
- (3) Lumbar \rightarrow 5
- (4) Sacral \rightarrow 5.
- (5) Coccygeal \rightarrow 1.

So the total pairs
of Spinal nerves
are 31. pairs.

Spinal cord tracts

\rightarrow Ascending tracts.

\rightarrow Descending tracts

(62)

=> Blood Supply of
Spinal cord :-

→ Single anterior
Spinal artery.

→ two posterior Spinal
artery.

 xx xx

(63)

Pharynx

→ The pharynx is muscular tube.

→ It connect the oral and nasal cavity to larynx and esophagus.

→ It begin at base of skull and end at inferior

border of cricoid Cartilage.

(64)

⇒ Parts of Pharynx

There are three parts of pharynx:

① → Nasopharynx.

② → Oropharynx.

③ → Laryngopharynx.

Size of Pharynx.

→ Approximately
12-14 cm length.

(05)

Anatomical position

The pharynx extend
from the base of
skull down to
inferior border of
the cricoid cartilage.

(around C6 vertebral
level) where

it becomes continuous
with the esophagus.

→ Superior aspect related
Sphenoid and occipital
Bones.

(67)

→ posterior aspect
to prevertebral
fascia and muscle
and as well as
upper six cervical
vertebrae.

Blood supply of
Pharynx :-

→ Arterial supply via.

(1) Ascending pharyngeal
artery.

(2) Branches of
facial artery.

(3) Branches of lingual
artery.

(68)

(4) Branches of maxillary arteries.

→ venous supply via.

① ~~pharyngeal~~ pharyngeal venous plexus.

Constrictors of
Pharynx:

1) → Superior constrictor.

2) → Middle constrictor.

3) → Inferior constrictor.

4) → Cricopharyngeus.

5) → Stylopharyngeus.

(16)
(69)

(6) → palato pharyngeus.

 xx xx

THE END

* THANK YOU *