**NAME; AKEREDOLU UBO**

**MATRIC NUMBER; 18/MHS02/028**

**COURSE CODE; ANA 210**

**DEPARTMENT; NURSING**

**NO 1**

The importance of vasculature in relation to immune system on the outbreak of pandemic covid-19 on the human system is that since vasculature means blood vessels and these blood vessels is made up of arteries, capillaries and veins which transport blood throughout the body and this blood is made up of plasma, red blood cells, white blood cells and platelets. When this virus comes in contact with the blood vessels through the lungs the white blood cells in the blood vessels would try to fight against it because of its immunity power and that is the neutrophil in the white blood cells. So for this immunity power to gain a stronger ground against the coronavirus it would need a lot of vitamin C and D and studies shows that these supplements increases the rate of immunity power.

**NO 2**

The sub sartorial canal which is also known as adductor canal or hunter’s canal is a narrow conical tunnel located in the thigh, it serves as a passageway from structures moving between the anterior thigh and posterior leg. It is approximately 15cm extending from the apex of the femoral triangle to the adductor hiatus of the adductor magnus. This canal is bordered by muscular structures viz; anteromedial (sartorial), lateral (vastus medialis) and posterior (adductor longus and adductor magnus). It transmits the femoral artery, femoral vein (posterior to the artery), nerve to the vastus medialis and the saphenous nerve- the largest cutaneous branch of the femoral nerve. As the femoral artery and vein exist the canal, they are called the popliteal artery and vein respectively.

If this canal is blocked, the local anesthetic is administered in the sub sartorial canal to block the saphenous nerve in isolation, or together with the nerve to the vastus medialis, the block can be used to provide sensory anesthetic for procedures involving the distal thigh and femur, knee and lower leg on the medial side. The Sartorius and femoral artery are used as anatomical landmarks to locate the saphenous nerve.

Adductor canal compression syndrome describes entrapment of the neurovascular bundle within the adductor canal. A rare condition which is usually caused by hypertrophy of adjacent muscles such as vastus medialis, it is most common in young males, who may present with claudication symptoms due to femoral artery occlusion or neurological symptoms due to entrapment of the saphenous nerve.

**NO 3**

The extraocular muscles are located within the orbit but are extrinsic and separates from the eyeball itself, they act to control the movements of the eyeball and superior eyelid. There are seven extraocular muscles; the levator palpebrae superioris, superior rectus, inferior oblique and superior oblique.

The levator palpebrae superioris→

Attachment; Originates from the lesser wing of the sphenoid bone, immediately above the optic foramen. It attaches to the superior tarsal plate of the upper eyelid (a thick plate of connective tissue)

Actions; Elevates the upper eyelid

Innervation; The levator palpebrae superioris is innervated by the oculomotor nerve (CN III). The superior tarsal muscle (located within the LPS) is innervated by the sympathetic nervous system.

Superior rectus→

Attachment; Originates from the superior part of the common tendinous ring, and attaches to the superior and anterior aspect of the sclera.

Actions; Main movement is elevation, also contributes to adduction and medial rotation of the eyeball

Innervation; Oculomotor nerve (CN III).

Inferior rectus→

Attachment; Originates from the inferior part of the common tendinous ring, and attaches to the inferior and anterior aspect of the sclera.

Actions; Main movement is depression, also attributes to adduction and lateral rotation of the eyeball.

Innervation; Oculomotor nerve (CNIII)

Medial rectus→

Attachment; Originates from the inferior part of the common tendinous ring, and attaches to the inferior and anterior aspect of the sclera.

Actions; Adducts the eyeball

Innervation; Abducens nerve (CN VI)

Superior oblique→

Attachments; Originates from the body of the sphenoid bone, its tendon passes through a trochlear and then attaches to the sclera of the eye, posterior to the superior rectus.

Action; Depresses, abducts and medially rotates the eyeball.

Innervation; Trochlear nerve (CN IV)

Inferior oblique→

Attachments; Originates from the anterior aspect of the orbital floor, attaches to the sclera of the eye, posterior to the lateral rectus

Actions; Elevates, abducts and laterally rotates the eyeball.

Innervation; Oculomotor nerve (CN III)

The extraocular muscles are innervated by three cranial nerves and any damage to the nerves will cause paralysis of its respective muscles. This will alter the resting gaze of the affected eye. Thus, a lesion of each cranial nerve has its own characteristic appearance.

• The intraocular muscles include the ciliary muscles, the sphincter pupillae, and dilator pupillae, the muscle is a smooth muscle ring that controls accommodation by altering the shape of the lens, as well as controlling the flow of aqueous humor into schlemm’s canal. The ciliary muscle are supplied by parasympathetic postaganglionic myelinated nerve fibers from the ciliary ganglion.

The iris sphincter muscle receives its parasympathetic innervation via the short cilliary nerves which lead to pupillary constriction (miosis) and accommodation. The parasympathetic fibers that serve the sphincter muscle.

The dilator muscle is innervated more specifically by postaganglionic sympathetic nerves arising from the sympathetic root of ciliary ganglion. From there, they travel via the internal carotid artery through the carotid canal to foramen lacerum.