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DEPARTMENT: NURSING

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 ASSIGNMENT

1. Describe the importance of vasculature in relation to immune system and outbreak of pandemic covid-19 on the human body

The vasculature is a network of blood vessels connecting the heart with all other organs and tissues in the body. Arteries and arterioles ring oxygen-rich blood and nutrients from the heart to the organs while veins and venules carry deoxygenated blood back to the heart. The exchange of gases and transfer of nutrients between blood and tissues take place in the capillaries. The vascular system has a crucial role because the blood being transported consists of plasma, red blood cells , white blood cells and platelets that is circulated by heart through the vertebrate vascular system. Thus, the white blood cells is very important in immune system of the body as it fights against germs and all.

It’s also important in the outreak of pandemic covid-19 as the vascular system provides oxygen and nutrients to every organ and tissue. The covid-19 is a respiratory disease which symptoms include difficulty in breathing. The vasculature therefore which provides oxygen is very important in this case.

1. Subsaortorial canal is an important area in the lower limb, discuss.

 The subsartorial canal is a narrow conical tunnel located in the thigh. It is approximately 15cm long, extending from the apex of the femoral triangle to the adductor hiatus of the adductor magnus. The canal servs as a passageway from structures moving between the anterior thigh and posterior leg

STRUCTURE

 It is an intermuscular cleft situated on the medial aspect of the middle third of the thigh on anterior compartment of thigh, and has the following boundaries;

Anteromedial wall- Sartorius

Posterior wall- adductor longus and adductor magnus

Laterally- vastus medialis.

CONTENTS

The canal contains the subsartorialartery (superficial femoral artery), subsartorial vein (superficial femoral vein), and branches of the femoral nerve (specifically, the saphenous nerve, and the nerve to the vastus medialis). The femoral artery with its vein and the saphenous nerve enter this canal through the superior foramen. Then, the saphenous nerve and artery and vein of genus descendens exit through the anterior foramen, piercing the vastoadductor intermuscular septum. Finally, the femoral artery and vein exit via the inferior foramen (usually called the hiatus) through the inferior space between the oblique and medial heads of adductor magnus.

CLINICAL SIGNIFICANCE

Adductor canal compression syndrome; describes entrapment of the neurovascular bundle within the adductor canal. It is most common in young males, who may present with claudication symptoms due to femoral artery occlusion.

1. Describe the extraocular and intraocular muscles with their nerve supply.

Extraocular muscles;

The extraocular muscles are the six muscles that control movement of the eye and one muscle that controls eyelid elevation (levator palperae). The actions of the six muscles responsile for eye movement depend on the position of the eye at the time of muscle contraction.

Nerve supply include;

CRANIAL NERVE MUSCLE

Oculomotor nerve (N. III) Superior rectus muscle

 Inferior rectus muscle

 Medial rectus muscle

 Inferior oblique muscle

 Levator palperae superiosis muscle

Trochlea nerve (N. IV) Superior oblique muscle

Aducens nerve (N.VI) Lateral rectus muscle.

Intraocular muscles

The intraocular muscle include the ciliary muscle, the sphincter pupillae, and the dilator pupillae. The ciliary 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 sphincter pupillae and dilator pupillae are also composed of smooth muscle.

Nerve supply

The ophthalmic nerve (CN V: VI) branches into the frontal, nasociliary, and lacrimal nerves. The ciliary ganglion is made up of postsynaptic parasympathetic nerve cell odies associated with the ophthalmic nerve. The short ciliary nerves originate from the iliary ganglion and carry parasympathetic and sympathetic fires to the iris and ciliary body. The long ciliary nerves branch off of the nasociliary nerve and carry postsynaptic sympathetic fibers to the dilator pupillae and afferent fiber from the cornea and iris. The sphincter pupillae is parasympathetically stimulated while the dilator pupillae is sympathetically-stimulated.