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1. A person can survive on a single lung quite well- providing that lung is in tip top condition. Lungs are easily damaged, though. Covid-19, the disease at the centre of the current corona virus outbreak is a case in point. Patients in serious condition have inflamed lungs whose tiny alveoli fill with water and pus, and are unable to make the oxygen exchange effectively. The first two patients to die from corona virus in china were healthy adults, but they were long-time smokers. Dr Raymond Tso, a US-trained Hong Kong specialist medicine, stresses that smoking is the single worst thing we can do for our lungs.

Corona viruses cause acute and chronic respiratory, enteric, and central nervous system diseases in many species of animals, including humans.

Human corona virus

Previous to the emergence of SARA-CoV,there were two prototype human corona viruses, OC43 and 229E, both etiologic agents of the common cold. There had been long speculation about the association of human corona viruses with more serious human diseases such as multiple sclerosis, hepatitis, or enteric diseases in newborns. However, none of these early association had been substained. The recently identified SARS-CoV, which was shown to cause a severe acute respiratory syndrome was the first example of serious illness in human caused by corona virus and will be discussed in detail in below. Since the identification of SARA-CoV, there have been reports of two new human corona viruses associated with respiratory disease. HKUI is a group ll corona virus isolated from an elderly patient with pneumonia. This virus has been difficult to propagate in cell culture, and there is a little information available about the biology of this virus. HCoV-NL63 is a group I corona virus isolated from a 7-month-old child in The Nethelands who was suffering from bronchiolitis and conjunctivitis. It has subsequently been reported in other parts of the world, including Canada(12), japan(86),Hong Kong(52), and Australia(5), and Belgium(220). HCoV-NL63 is associated with serious repiratory symptoms, including upper respiratory infection, bronchiolitis, and pneumonia. The strong correlation of the presence of strong correlation of the presence of NL63 with croup in children with lower respiratory infections has suggested a causal relationship between virus and croup. When primarily associated with infections of children, NL63 has been also detected in immunocompromised adults with respiratory tract infections. This virus was independently isolated in New Haven, Connecticut, and called HCoV-NH. That group has suggested that this virus is associated with Kawasaki’s disease in children; however, this has been diputed by two other reports. While little is known about pathogenesis of any of the human coronaviruses (229E, OC43, HKU1, NL63, and SARS-CoV), there have been detailed studies of the pathogenesis of some of the animal coronaviruses, which may contribute to the understanding of the human viruses. We summarize some of these data below.

2.The adductor canal (Hunter’s canal, subsartorial canal) is a arrow 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 hiatus of the adductor magnus. The canal serves as a passageway from structures moving between the anterior thigh and posterior leg.

In this article, we shall look at the anatomy of the adductor canal – its borders, contents and clinical relevance.

Borders

The adductor canal is bordered by muscular structures;

* Anteromedial: Sartorius.
* Lateral: vastus medialis
* Posterior: Adductor longus and adductor magnus.

The adductor canal runs from the apex of the femoral triangle to the adductor hiatus- a gap between the adductor and hamstring attachments of the adductor

Cross section of the thigh, showing the borders of the adductor canal. Note: the adductor magnus is not visible in this illustration.

Contents

The adductor canal serves as a passageway for structures moving between the anterior thigh and posterior leg.

It transmits the femoral artery, femoral vien( 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 exit the canal, they are called the popliteal artery and vein repectively.

3.The extraocular muscles are located within the orbit, but are extrinsic and separate from the eyeball itself. They act to control movements of the eyeball and the superior eyelid.

There are seven extraocular muscle- the levator palpebrae superioris, superior rectus, inferior rectus, medial rectus, lateral rectus, inferior oblique and superior oblique.

The levator palpebrae superioris is innervated by the oculomotor nerve (CN III) The levator palebrae superioris receives motor supplies from the superior division of oculomotor nerves. Its smooth muscle component, the superior tarsals muscle, is supplied by sympathetic fibres that originate in the cervical spinal cord and travel along the carotid artery.

The superior rectus is innervated by the Oculamotor nerve(CN III).

The inferior rectus is innervated by oculamotor nerve(CN III) The blood supply to the inferior rectus is provided by the ophthalamic artery and the infrabital branch of the maxillary artery.

The medial rectus is innervated by the oculomotor nerve(CN III).

The lateral rectus is inervated by the Abducens nerve (CN VI). It is only muscle supplied by the abducens nerve, cranial nerve VI. The abducens nerve exits the brainstem from the pons-medullary junction, and travels through the superior orbital fissure to innervate the lateral rectus muscles.

The superior Oblique is innervated by the Trochlear nerve(CNIV).

The inferior Oblique is innervated by the oculomotor nerve(CN III)

* The intraocular muscles 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, aas well as controlling the flow of aqueous humor into Schlemm’s canal. The ciliary muscle are supplied by parasympathetic postganglionic myelinated nerve fibers from the ciliary ganaglion.

The iris sphincter muscles receives parasympathetic innervation via the ciliary nerves which is lead to pupillary constriction and accommodation. The parasympathetic fibres that serve the sphincter muscle.

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