

The Abducens Nerve

Nervus abducens or the *abducens nerve* (**VI. cranial nerve**) is a motor nerve that serves to innervate the rectus bulbi lateralis muscle.

Anatomy

Origin

Nucleus nervi abducentis in fossa rhomboidea, under the base of IV. cerebral ventricles and colliculus facialis, in the lower part of the pons Varoli.

Course

It emerges from the brainstem and goes forward to the cavernous sinus, where it is situated lateral to the internal carotid artery and medial to the oculomotor, trochlearis, and ophthalmic nerves.

It then enters the orbit through the fissura orbitalis superior and passes through the annulus tendineus communis.

Entering the orbit, it runs between two branches of the oculomotor nerve and laterocaudally from the nasociliaris nerve.

It attaches to the inner surface of the rectus lateralis muscle, where it sends out branches and innervates it motorically.

It emerges from the brainstem in the sulcus bulbopontinus (the interface between the medulla oblongata and the pons Varoli). It heads forward to the apex of the pyramid, where it pierces the dura mater. It enters the lateral wall of the cavernous sinus. It passes through the fissura orbitalis superior and the annulus tendineus communis. On the medial side of the rectus bulbi lateralis, it splits into terminal branches that enter the muscle.

Function

It turns the bulbus oculi laterally.

Neurology

Lesion

Convergent strabismus – limited movement of the bulb laterally (predominance of other oculomotor muscles).

diplopia – (double vision) when looking at the affected side.

Neurological examination

We determine the position of the bulbs and movement in all directions while looking at the finger from a distance of 1 m. We note under-tightening of the bulb, diplopia or strabismus.

Links

- AMBLER, Zdeněk. *NEUROLOGIE pro studenty lékařské fakulty*. 2. vydání. Praha. 2001. 399 s. ISBN 80-246-0080-3.
- GRIM, Miloš a Rastislav DRUGA. *Základy anatomie, Periferní nervový systém, smyslové orgány a kůže*. 1. vydání. Praha : Galén, 2014. 173 s. ISBN 978-80-7492-156-8.