Unit 18: Topographic anatomy: Eye and orbit

Guide for the practical class using Anatomedia online

Topography of the orbit

1. Go to An@tomedia, **head** module-regions-frame: **05** (Regions of head)
    -Click on underlined text to locate and distinguish cranial, facial and upper airway regions of the head, see where orbit belongs
    -Activate 'can you identify' to see that the orbit is a cranial region with skin covering

2. Go to An@tomedia, **head** module-regions-frame: **13** (Walls and apertures of orbit)
    -Click on underlined text to identify:
        -walls of the orbit
        -orbital apertures and their contents
        -common tendinous ring
    -Activate 'can you identify' to visualize bones that form walls of the orbit, muscles, nerves and vessels of the orbit

Orbital cavity and its contents

3. Go to An@tomedia, **head** module-regions-frame: **14** (Orbital cavity and conjunctival sac)
    -Click on underlined text to identify:
        -periorbita and bulbar fascia
        -muscles, nerves, ganglion and vessels of the orbit
        -conjuncitval sac
    -Activate 'can you identify' to visualize all structures listed above

4. Go to An@tomedia, **head** module-regions-frame: **15** (Eyelids and orbital septum)
    -Click on underlined text to identify:
        -surface features on eyelid and eyes
        -layers of eyelids
        -orbital septum and palpebral ligaments
    -Activate 'can you identify' to visualize surface of eyeball and eyelids, lacrimal apparatus, orbital septum, muscles that move eyelids

5. Go to An@tomedia, **head** module-systems-frame: **36** (Lacrimal gland and apparatus)
    -Click on underlined text to identify:
        -position of lacrimal gland and ducts
        -path of tears
        -lacrimal sac and canaliculi
        -elements of lacrimation reflex
    -Activate 'can you identify' to visualize components of lacrimal apparatus

Extraocular muscles (bulbomotors)

6. Go to An@tomedia, **head** module-systems-frame: **28** (Muscles of orbit)
    -Click on underlined text to list and distinguish:
        -common origin of these muscles
        -position/action of extraocular muscles
        -innervation and clinical relevance of bulbomotors
    -Activate 'can you identify' to visualize position and features of individual bulbomotors, press colored buttons to highlight muscles, fascia, fat, nerves…

The Eyeball

7. Go to An@tomedia, **head** module-systems-frame: **59** (The eyeball)
    -Click on underlined text to list and distinguish:
        -the organization of the eyeball
        -division to three coats/layers and details about their anatomy
        -vascular and nervous supply of the eyeball
    -Activate 'can you identify' to visualize different components of all three layers, chambers within the eyeball, features of conjunctiva, ciliary, choroid and retinal vessels…, press colored buttons to highlight muscles, fascia, nerves, vessels…

8. Go to An@tomedia, **head** module-imaging-frame: **43** (Eyeball-ophthalmoscopy & OCT)
    -Activate 'can you identify' to see surface anatomy of the eye, features of the ocular fundus, retinal vessels, cornea and iris, chambers of the eye and retinal layers

Nerves and blood vessels of the orbit

9. Go to An@tomedia, **head** module-systems-frame: **60** (Cranial nerve II and visual path)
    -Click on underlined text to review anatomy of the optic nerve, chiasma, optic tract, LGN, optic radiation, primary visual cortex as well as principles of blink and pupillary reflexes
    -Activate 'can you identify' to visualize components of visual pathway

10. Go to An@tomedia, **head** module-systems-frame: **61** (Cranial nerves III, IV and VI)
    -Click on underlined text to review visualize nuclei, course, distribution and effect of lesion of CN III, IV and VI (Bulbomotor nerves)
    -Activate 'can you identify' to visualize components of innervation of both extra- and intra-ocular muscles

11. Go to An@tomedia, **head** module-systems-frame: **62** (Cranial nerve V)
    -Click on underlined text to review anatomy of trigeminal nerve, particularly the ophtalmic nerve (Va) and its branches
    -Activate 'can you identify' to visualize individual branches of the ophthalmic nerve

12. Go to A@tomedia, **head** module-systems-frame: **69** (Internal carotid artery)
    -Click on underlined text to visualize branches of internal carotid artery, particularly the course and branches of the ophthalmic artery
    -Activate 'can you identify' to visualize the above arterial branches

13. Go to An@tomedia, **head** module-systems-frame: **70** (Dural venous sinuses)
    -Activate 'can you identify' main extracranial veins draining into the cavernous sinus