EYE MOVEMENTS

Date: January 28, 2016

Resources: Abbreviated and focused recording from – Eye movement PPT – Gruener
Complete – Eye movement PPT – Gruener
UBC Learning Module on Control of eye movements
http://www.neuroanatomy.ca/module_list.html (Don’t use IE and you need the adobe flash plugin)
TeachSheet on the Eye Movements
Essential Neuroscience, 3rd edition by Siegel & Sapru: Chapter 14

KEY CONCEPTS & LEARNING OBJECTIVES (What you need to demonstrate to pass the test!)

I. Demonstrate the ability to:
   i. Describe the action of the extraocular muscles; Medial and lateral rectus muscles, Superior and inferior rectus muscles, Superior and inferior oblique muscles
   b.) Describe conjugate eye movements with respect to their underlying anatomical pathways
      i. Slow or guided eye movements (Role of the vestibuloocular reflex, smooth pursuit, brainstem centers for gaze)
      ii. Fast or ballistic eye movements (Role of the “Frontal” eye fields)
   c.) Describe the components of accommodation/vergence movements
   d.) Define/describe internuclear ophthalmoplegia

II. As the course progresses you need to demonstrate the integration of anatomical and clinical knowledge by:
   a.) Suggest a site of dysfunction that would explain signs and symptoms for a clinical case presentation
   b.) Based on a clinical presentation identify the (expected) site of abnormality on an MRI (or CT) scan of the brain
   c.) Develop 2-3 potential diagnoses, appropriate to the patients’ clinical scenario, course and medical history, which would explain the etiology of their difficulty.

Additional References for those who are really (we mean really) interested!

Biller J. Practical Neurology. 4th Ed., Lippincott Williams & Wilkins 2012

Bruenech JR, Kjellevold Haugen I B. How does the structure of extraocular muscles and their nerves affect their function? Eye 2015;29:177-183
Pouget P. The cortex is in overall control of 'voluntary' eye movement. Eye 2015;29:241-245

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