

E-LEARNING IN TEACHING ANATOMY

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Abstract

For teaching anatomy, a morphological discipline, quality aids are essential. Department of Anatomy, Faculty of Medicine in Pilsen, has been using the multimedia electronic applications since 2004. With the widespread increase of the internet as a tool for everyday use, we have been searching for new methods in teaching the most demanding and demanded anatomical topics by use of internet. Moodle was set up at the Department of Education and IT Application (OVAVT) in 2002. Since its inception, Moodle has been used as a teaching tool in anatomy courses, primarily for the purpose of supplementing practicals. Our students are offered six e-learning courses at present, we also use the Moodle environment to run an electronic information board and final exam tests on anatomy.

In our poster we introduce the Atlas of Brain Sections and the Temporal Bone course. These were currently upgraded within this year and were made available also for Mefanet.

Keywords: e-learning, anatomy, temporal bone, brain sections

Introduction:

Both the Atlas of Brain Sections and the Temporal Bone course are aimed at the first and the second year medical students. They offer a guideline to those, who are just beginning to learn the topic, but they can also be useful to students who are reviewing anatomy for other clinical disciplines.

Materials and Methods

Atlas of Brain Sections

Two human brains fixated in formaldehyde were cut in the frontal and horizontal plane into slices about 7 mm thick. The digital photos were adjusted in Adobe photoshop programme. Correl software was used in order to provide identification and description of the most important structures. The Atlas of Brain Sections offers various 15 frontal and 5 horizontal sections, each section can be compared with an accompanying schematic drawing.

Os Temporale – Blended e-Learning Course

Flash animation plays a critical role in this course. Three right side human temporal bones were successively ground off, each at a different anatomical plane. After removing 0.5 mm thick layer of the bone, photographs were taken using an Olympus E-400 camera, with a 14 – 24 mm lens focal length. The temporal bone animations visualize both the entire bone and its inner structures. The Course includes also the interactive dictionary, test and questionnaire.

Discussion:

We have started with the upgrading of the e-learning study materials on anatomy this year. There are many challenges. We aim to complete all our current courses with figures and schemes of some imaging methods like computed tomography and nuclear magnetic resonance, cooperating with our clinical departments we would like to enhance the clinical application of anatomy. But even if the e-learning offers many advantages like distance and flexible learning, immediate access to course material, cost and time-effectiveness, it can not completely substitute practicals with authentic dissection and preparations.

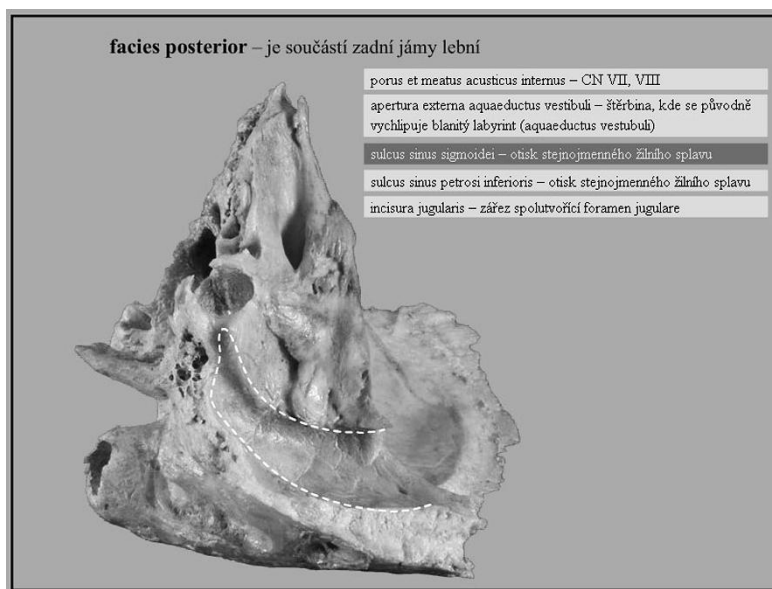


Figure 1: Right temporal bone, posterior aspect

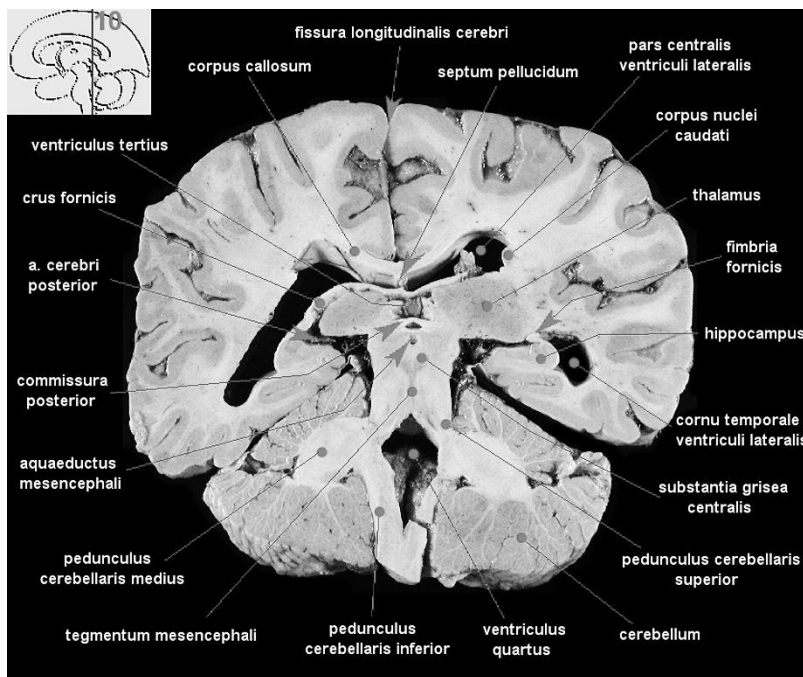


Figure 2: Posterior aspect of a coronal section of the brain through the hemispheres, thalamus and mesencephalon

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