DIAGNOSTIC PATHOLOGY

ORAL PRESENTATION

Four years experiences teaching pathology with the WebMicroscope to dental students

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Background

We have developed and evaluated a user-friendly on-line interactive teaching and examination system for pathology. Since 2005 all laboratory lessons have moved to computer class-room. Traditional microscopes for students were replaced by computers and interactive sessions using Internet based WebMicroscope. By accessing full digitized slides on web with a browser and viewer plug-in, computer got perfectly companion of the student. All laboratory sessions are still supervised by pathologists.

Methods

The study material consists of over 400 full digitized slides which comprise 15 entities in basic pathology and 15 entitles in oral pathology. Digitized slides are linked with still macro- and microscopic images, organized with clinical information into virtual cases and supplemented with text files, PowerPoint presentations and animations, serving additionally as self study material on the web.

Results

Overall, 92% concordance rate has been achieved on practical examination based on 50 virtual slides pro every student connected with 50 multi-choice test questions. On-line teaching and on-line practical examination was evaluated through students' responses to the question-naire-based evaluation. After completion courses and passing on-line practical examination in 2005/06, 2006/07, 2007/08 and 2008/09 all dental students of the third term at the Medical University of Poznan were asked to fill an survey to evaluate their acceptance of Webmicroscope. Students were asked to complete forms after their examination and full anonymization of data was guaranteed. Responses were evaluated on a standardized scale. A high response rate was achieved (99%). Satisfaction surveys showed progressive improvement over the past 4 years, as various suggestions were implemented. WebMicroscope as didactic tool during laboratories was rated 8.4 in 2004/05 and 9.4 in 2007/08 in scale 1-10. All students preferred the on-line examination over a traditional microscope and paper-and-pencil examination and all felt that the quality of digitized slides was superior to make an accurate diagnosis (rating 9,5 in scale 1-10).

Results

With current technology digital slides are technically feasible and virtual microscope is available at any time and any place via broadband Internet. Dental students have not only accepted this technology but have indicated enthusiasm for the development of further on-line teaching resources in pathology. Because our WebMicroscope provides the convenience of a Web-based resource with high-quality images we believe that viewing whole slides on this way adds a totally different dimension in teaching pathology. It is allows students to explore slides at any area and any magnification and independently identify and discover pathological changes.

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