

Section: E-Learning und Simulation

ID: 86

Abstract-Title:

SEE ONE – HEAR ONE – DO ONE: DIAGNOSIS TRAINING NEURORADIOLOGY
SEHEN – HÖREN – TRAINIEREN: DIAGNOSE TRAINING NEURORADIOLOGIE

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Purpose:

Well-structured and advised education and advanced training in medical science is not easy to be realised due to limitations of time and financial resources of the learner as well as of the teacher. For disciplines like neuroradiology there is also the problem of being a highly specialised discipline, often dealing with diseases that are very rare. Mainly these diseases are best treated in specialised centres but diagnosis often has to be done in other hospitals or in general practice. Therefore it is necessary to distribute knowledge about the correct and efficient way of diagnosing such diseases and how to treat them therapeutically over a wide area. To structure teaching and learning efficiently and economically we developed a special didactic concept we call "Diagnosis Training" that is integrated in a comprehensive eLearning concept called "Blended Learning". Methods: To illustrate the advances of the concept of "Diagnosis Training" and eLearning the diagnostic and therapeutic data of patients with midface fractures and with intracranial aneurysms are exemplarily presented. "Diagnosis Training" is a combination of ex cathedra teaching and advised analysis of patient data by the teacher and autonomous study and practicing of the learner. During seminars teacher and learner interact personally, furthermore the learner is provided with the possibility to utilise the case library via the internet from anywhere. The collection of the cases is didactically oriented and ranges from rather normal findings to very complex pathologies. "Diagnosis Training" is realised with the help of the utilisation of a web-based application called "Schoolbook", allowing to create a multimedial case library easily.

Results:

Due to the combination of ex cathedra teaching, advised learning and self study the knowledge can be mediated more efficiently than by using the different ways of teaching singularly. The teacher does not only demonstrate the methods of analysing the different radiological data but does also provide the learner with a simulation of the daily work situation via "Diagnosis Training", hereby the learners are able to train their own skills of diagnosing. In this way physicians from other disciplines, e.g. neurologists or neurosurgeons, are provided with a virtual neuroradiological working situation and radiologists are able to work with the imaging data in a way that is similar to their own working environment. The diagnostic data of patients with midface fractures and

intracranial aneurysms are presented exemplarily to illustrate the possibilities and advances of multiplanar and three-dimensional imaging especially for educational purposes.

Conclusions:

Due to its interactive character "Diagnosis training" stimulates the motivation to learn. The learner is asked to get into practice with the various diagnostic instruments and the specific diseases of neuroradiology during the seminars after having seen and heard of them within the ex cathedra and advised periods of teaching. Additionally the possibility of online-availability of the several case histories via the web-based application Schoolbook serves autonomous and self-determined self study of the learner independent from place and time.