



Assessment of a learning tool for first year radiology residents to aide in independent preparation for their transition from internship to radiology residency, specifically to body CT.

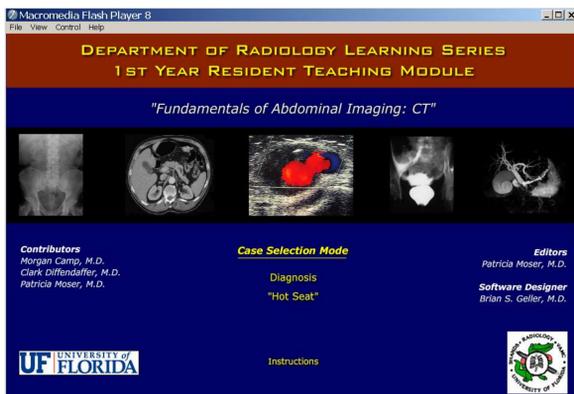
Patricia Moser, MD

Department of Radiology, University of Florida College of Medicine, Gainesville FL

ABSTRACT

First year radiology residents come to their first day of residency with minimal applicable radiology experience. As such, many of these residents may feel overwhelmed and ill-prepared to begin their first radiology rotations. The aim of this study is to create a learning module and assess if completing this learning module on an independent basis before beginning the body CT rotation will decrease the feelings of anxiety and improve the intern to radiology resident transition. An experimental design will be used where the first year radiology residents will be split into a control group that do not complete the learning module and a study group that do complete the learning module. The residents will be surveyed as to their subjective feelings of preparedness and anxiety both before beginning the module and at the end of their rotation. Both groups will also complete a validated acute stress assessment before and after their rotation.

Figure 1 Learning Module: Fundamentals of Abdominal Imaging: CT



INTRODUCTION

Radiology residents often express anxiety about the beginning of radiology residency, especially in regards to their radiology knowledge when they are expected to sit down on their first day of work and begin dictating. Our residency program over the years has tried different modalities to address this, including a first year lecture series or chapter assignments and group review with faculty. There were several problems with these other modalities: the lecture series was given over a several month time interval or the first lecture may be in chest radiology when a particular resident begins in ultrasound and would benefit from a lecture on that topic. By developing modules which can be performed individually, both the time in which it is completed and the topic which is chosen by each resident can be customized as opposed to a lecture series. The module would allow section specific (i.e. Body CT in this case) introductory education.

METHODS

A learning module was created utilizing a program developed by Dr. Brian Geller. The 2009-2010 first year radiology resident schedule was reviewed and all rotations in Body CT were identified extending from June 2009 until May 2010. 6 of the 11 residents were randomly selected for the study group, leaving 5 residents for the control group. The study group will be asked to complete the learning module prior to beginning the rotation and both groups will be asked to complete two surveys before and after completing the rotation. One survey will question how prepared they feel about beginning the rotation and how they feel about their transition to radiology residency with a scale of 1 to 5 with 1 = strongly disagree and 5 = strongly agree. The other survey is a validated acute stress assessment (Perceived Stress Scale). Additionally, those in the study group will be asked specific questions about the learning module.

RESULTS

At this time, 9 of the 11 first year radiology residents have completed the rotation and the surveys. All of the residents were males and the average Perceived Stress Scale (PSS) for males is 12.1. The PSSs were scored. Four residents in the study group had a mean score of 10.5 before completing the module and rotation, with a mean score of 10 after completing the module and rotation. Five residents in the control group had a mean PSS score of 11 before and 10.8 after completing the rotation. On the additional questionnaire, all of the surveyed residents had an average score of 3.1 (agree nor disagree) when asked if they felt their medical training had prepared them for the body CT rotation. They had a score of 3.3 when asked if they were anxious about the body CT rotation. For those who participated in the module, they gave an average score of 3.6 when questioned if the module reduced their initial feelings of anxiety. They gave a score of 4.2 (agree) when asked if they felt the module was an effective teaching method for the body imaging rotation and a score of 4.4 when asked if they would like similar learning modules for other divisions in radiology.

Figure 2 Example of a learning module case

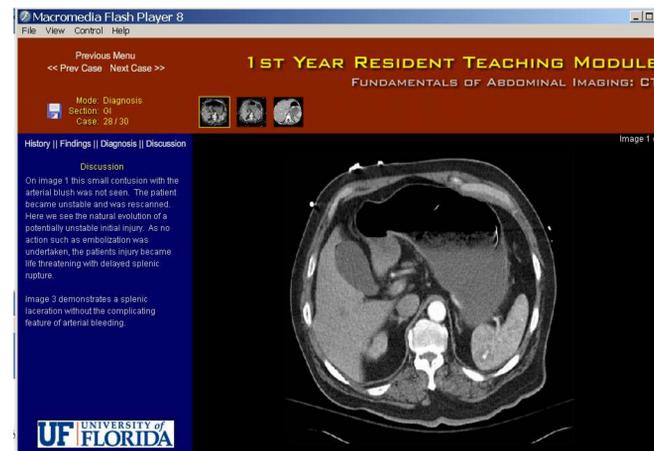
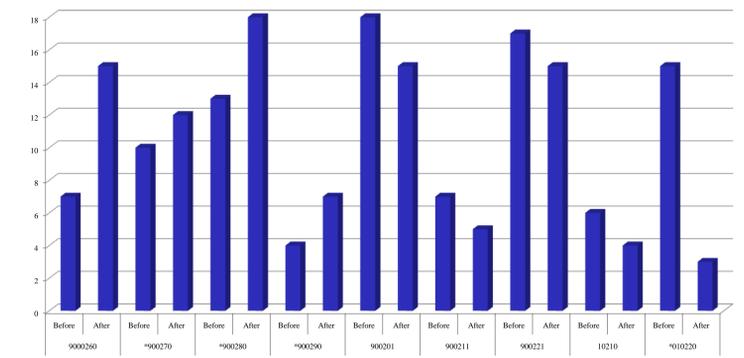


Figure 3 Perceived Stress Scale Score



* Signifies residents who were part of the "experimental group"

CONCLUSIONS

The additional residents will need to complete the module, rotation and surveys so that more data is available. At this time, the residents' PSS scores demonstrate no significant change between the control and experimental groups. The resident answers were neutral on questions about their perceived anxiety prior to beginning the rotation. However, those residents who participated in the module gave very positive responses on their opinions of it as a teaching method and that they would like similar learning modules for other divisions in radiology. Additionally, there has been interest by other faculty members in developing similar modules for their division so that this learning method might be more widely applied.

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