

COLLABORATION AMONG CLINICAL AND BASIC SCIENCES FACULTY IN A SKILLS SESSION FOR SECOND YEAR MEDICAL STUDENTS THAT TAUGHT BEST PRACTICES FOR DIAGNOSING VAGINITIS

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PURPOSE

To teach second year medical students microscopy skills that are clinically relevant to the care of women

METHODS

A skills lab was begun 2 years ago to prepare students for a Clinical Learning Center Simulation of an Annual Well Woman Encounter. Clinical faculty had expressed concern over general discomfort and lack of skills in students when performing wet mounts associated with the work-up of vaginitis. Collaboration between microbiology, clinical sciences and the simulation center resulted in a process that enabled the institution to provide live microbiologic specimens, specifically *T. vaginalis* and *C. Albicans* for a structured experience in best practice performance techniques recommended by the CDC for diagnosing vaginitis. In addition basic microscopy skills, pH and whiff tests were performed.

RESULTS

120 second year medical students participated in the 40 minute session with successful completion of: basic review of microscopy; best practices preparation of wet mount studies; and identification of two unknown 'vaginitis' specimens through completion of a Vaginitis Differential Diagnosis grid based on microscopic findings pH and whiff test results.

CONCLUSIONS

Collaboration among clinical and basic sciences resulted in an innovative approach to an educational deficit identified in student preparation for clinical practice environments. Although there is a movement away from using microscopes in medical school, it is used daily in the practice of the majority of general Obstetrician-Gynecologists in the United States. Since vaginitis is the most common presenting complaint in Women's Medicine, facilitating students' ability to make the correct diagnosis has the potential for benefitting large numbers of women when students enter practice.

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MEDICAL STUDENT KNOWLEDGE AND COMFORT WITH LUMBAR PUNCTURE AND THE POWER OF A STANDARD TEACHING MODULE

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PURPOSE

A standard method for teaching Lumbar Puncture (LP) skills is not described in the medical education literature, although LP is required in clinical practice (Wigton, 2007). We therefore created and implemented a Standardized LP skills Teaching Module (TeachLP) for medical students. The purpose of this study is to measure the impact of TeachLP on student knowledge and comfort with the LP.

METHODS

Twelve medical students, five fourth-year and seven third-year students, from Tulane University School of Medicine neurology clerkship were selected for the pilot group of this study. Each student completed a pre-training questionnaire about exposure and comfort with the procedure, and a pre-knowledge test. Students then completed TeachLP, which incorporates lecture and practical experience on an LP mannequin simulator. Participants were assessed using a procedure checklist, a knowledge post-test, and post-training questionnaire. De-identified data was uniformly analyzed with coding by one researcher. This study received IRB approval.

RESULTS

All 12 student responses were included in results. Before completing TeachLP, student-reported comfort in performing an LP was 1.9 on a 5 point Likert scale (median and mode of 1). 11/12 desired an opportunity to learn. Average pre-test knowledge score was 68%, with poor safety knowledge. After completing TeachLP, student-reported comfort in LP performance doubled to 3.9 (5 point scale; median and mode of four), and all stated the training was beneficial. Knowledge test scores also improved an average of 25%, from 13.58/20 pre-test to 18.65/20 post-test. Safety knowledge improved most. Procedure checklist also reflected competency.

CONCLUSIONS

This pilot study showed that most students are uncomfortable with, and largely uninformed about most aspects of the LP procedure. However, using TeachLP one can significantly improve students' knowledge and confidence, while additionally acquiring LP procedural skills. A larger study is ongoing and may be helpful in generalizing these conclusions to other students.

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NEW TRAINER FOR THORACENTESIS TRAINING

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PURPOSE

Thoracentesis is a common procedure which plays an important role in diagnosis and treatment on pleura effusion. However, most internal medicine residents were uncomfortable performing this procedure due to the high risk of the life-threatening complication. Although simulation-based thoracentesis practice dramatically improved residents' skills in thoracentesis, the available simulators can not well mimic the situations, such as pneumothorax. We have developed a thoracentesis training model which can compensate some deficiencies.

METHODS

The new model is update mainly in 3 areas. Firstly, it has a bigger reservoir which allows the trainer find the appropriate aspirate site by the percussion. Secondly it has a balloon in the thoracic cavity to mimic the lung which will collapse if the trainer punctures too deep. Finally, it has a detector below the ribs to imitate the intercostals vessels, the alarm lights will flash if the needles contact with it.

RESULTS

This unique module has been tested at several seminars in our medical school. In the questionnaire, training participants strongly agreed that the trainer was helpful and prepared them well for thoracentesis prior to performing actual procedure. Evaluation of the performance score and confidence score for thoracentesis with our simulator were higher than the traditional simulators. Importantly, the scores also correlated with the participants' experience with actual procedure. Technical factors were well taught using this model.

CONCLUSIONS

Thoracentesis skill can be better practiced by the new trainer than traditional modular.

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