Retention of Knowledge of Basic Abdominal Ultrasound Examination performed by Clinical Peer Tutors

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BACKGROUND

A basic abdominal ultrasound (BAUS) examination is one of the most difficult skills taught in PTs’ led subject. Selected topics and novelties in paediatrics (STNP). The aim of our evaluation was to define the retention rate BAUS examination skills of PTs from their objective structured clinical examination (OSCE) at STNP as students until their clinical skills training as PTs at least 9 months later. The results could help us structure PTs’ trainings and define aspects of teaching, on which more emphasis should be made.

METHODS

Using our standard checklist for BAUS, we assessed 9 PTs before and after PTs training of BAUS examination. Beforehand, none of them knew that they would be assessed. We compared these scores with scores they obtained in OSCE at STNP. Nonparametric Wilcoxon test was performed (p<0.05). They were also given a questionnaire, where they marked how many hours of ultrasound (US) training they had during their study.

RESULTS

We assessed tutors from 4th, 5th and 6th year of study. Mean scores considering time passed from OSCE at STNP:
• 9 months ago 23.5±2.8 points,
• 21 months ago 23.3±4.2 points,
• 33 months ago 20.3±2.8 points.

PTs that had more than 20 hours of previous US training (n=4) achieved higher points than PTs that had 20 hours or less training (n=5) (23.5±0.0 vs. 19.1±3.4 points; p=0.038).

CONCLUSION

- PTs retention of BAUS examination knowledge is high.
- An emphasis should be made on examination of gallbladder, liver and kidneys.
- The knowledge of protocol pales with time.
- Additional work with US improves the retention of knowledge, so PTs should be given as many opportunities as possible to train their skills.

If we want PTs to be good and skilled teachers, the training should have an important emphasis on BAUS. We should bear in mind that retention of BAUS examination knowledge is falling irrespectively of the score on OSCE, so additional US hours are necessary for the refreshment of the gained knowledge.
Retention Rate of Basic Abdominal Ultrasound Examination Skills by Clinical Peer Tutors

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Introduction: A basic abdominal ultrasound (BAUS) examination is one of the most difficult skills taught in PTs’ led subject Selected topics and novelties in propaedeutics (STNP). The aim of our evaluation was to define the retention rate BAUS examination skills of PTs from their objective structured clinical examination (OSCE) in STNP until their clinical skills training as PTs at least 9 months later. The results could help us structure PTs trainings and define aspects of teaching, on which more emphasis should be made.

Methods: Using our standard checklist for BAUS, we assessed 9 PTs before and after PTs training of BAUS examination. Beforehand, none of them knew that they would be assessed. We compared these scores with scores they obtained in OSCE at STNP. Paired t-test was performed (p<0.05). They were given a questionnaire, where they marked how many hours of ultrasound (US) training they had during their study.

Results: Mean OSCE score in STNP was 24.6±1.0/25 points with mean completion time of 617±82/720 s. Mean score before PTs training was 21.1±3.3/25 points with mean time 657±73/720 s. Most common mistakes were assessment of gallbladder (50% correct), visualization of liver in subcostal, intercostal and epigastric area (67% correct) and left kidney visualization (86% correct). Only 67% of PTs asked a model for how long had he fasted. Mean score after PTs training was 24.6±1.0/25 with mean time 630±46/720 s. Retention rate fell from 98% at previous OSCE to 84% (p=0.031) before PTs training and rose to 98% (p=0.031) after PTs training. PTs that had more than 20 hours of previous US training (n=4) achieved higher points than PTs that had 20 hours or less training (n=5) (23.5±0.0 vs. 19.1±3.4 points; p=0.038).

Discussion: According to our results, PTs retention rate of BAUS examination is high. However, since the retention rate is falling with time, it is important to repeat the performance of BAUS with an emphasis on examination of gallbladder, liver and kidneys. The knowledge of protocol also pales with time, which can be seen from most common mistakes. Additional work with US improves the retention rate, so PTs should be given as many opportunities as possible to train their skills.

Conclusion: If we want PTs to be good and skilled teachers, their training should have an important emphasis on BAUS. We should bear in mind, that retention rate of BAUS examination is falling irrespectively of the OSCE score, so additional US hours are necessary for the refreshment of the gained knowledge.