P-05 iExaminer system: An effective teaching method to improve fundus examination skills

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Introduction:

Fundus examination skill is required for primary care physicians to prevent the development of blindness. However, it is difficult to provide training in the necessary clinical skills as students and the teacher cannot share their visual fields. The iExaminer system turns the ophthalmoscope into a mobile digital imaging device allowing you to view and take pictures of the eye. We investigated whether this methodology is superior to the previous teaching methods for training in the clinical skills required for fundus examination.

Methods:

A controlled trial was designed to compare the effects of two practical guidance methods on student performance during fundus examinations. The study population comprised 71 medical students participating in a general medicine clinical clerkship rotation in 2017. The participants examined the fundus on an eye simulator before and after clinical skills training, and presented their findings (3 findings each before and after the training session). Participants were randomly assigned to either a practical guidance method with the iExaminer System (intervention group: n=34) or a practical guidance method without the iExaminer System (control group: n=37). The training was equally provided for 30 minutes in the intervention and control groups. Major outcome measures were diagnostic accuracy in funduscopic findings and duration of examination in both groups.

Results:

Diagnostic accuracy was higher using the iExaminer System (intervention group: 16.0 ± 0.37% to 40.0 ± 0.49%, control group: 21.0 ± 0.37% to 25.0 ± 0.44%, $F(1,211) = 8.07$, $p = .005$). The duration of funduscopic examination was shorter using the iExaminer System (intervention group: 82.2 ± 14.4 s to 66.8 ± 21.3 s, control group: 83.5 ± 13.0 s to 77.1 ± 18.4 s, $F(1,211) = 11.77$, $p = .002$).

Conclusions:

Teaching the fundus examination method based on the iExaminer system leads to improved diagnostic accuracy, while reducing total examination time.

P-10 Association between outpatients treated for hypertension in internal medicine and alcohol dependence: A cross-sectional study of an internet panel

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Introduction: Hypertension is one of the most common noncommunicable diseases, and is significantly related to excessive alcohol drinking. Thus, patients with hypertension may have alcohol dependence. However, the association between outpatients treated for hypertension in internal medicine and alcohol dependence is unclear in Japan.

Study Design: Cross-sectional study

Setting & Participants: Internet panel sample from the general population (N=20,000) that had a drinking habit (2−3 times or more/week)

Predictor or Factor: Alcohol dependence

Outcome: Outpatients treated for hypertension in the department of internal medicine (yes or no)

Measurements: Alcohol dependence was defined as an Alcohol Use Disorders Identification Test (AUDIT) score of ≥15. The AUDIT contains 10 questions: three on alcohol use, four on alcohol dependence, and three on alcohol-related problems. The Japanese version of the AUDIT was created based on World Health Organization (WHO) translational methodology (Hiro et al. 1996).

Results: The mean age of the participants was 49.3 years; 66.0% were men. The number of outpatients treated for hypertension in the department of internal medicine was 3,261 (16.3%). The average AUDIT score was 8.77, and 3,392 (17.0%) patients were diagnosed with alcohol dependence. In the logistic regression analysis, after adjusting for age and sex, outpatients treated for hypertension showed significantly higher alcohol dependence (odds ratio 1.54, 1.40−1.69).

Limitations: Causation cannot be determined in a cross-sectional study. With the internet panel, sampling bias may exist.

Conclusion: Outpatients in Japan treated for hypertension in internal medicine had significantly higher alcohol dependence. Effective alcohol screening and intervention may be essential in internal medicine.

P-16 Comparison of treatments for persistent/chronic immune thrombocytopenia: a systematic review and network meta-analysis

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Background: Recent studies have indicated that medical options without splenectomy, such as rituximab (RTX) or thrombopoietin receptor agonists (TPO-RAs), can be effective to treat persistent/chronic primary immune thrombocytopenia (ITP). However, it remains to be determined which of these strategies should be the first choice.

Methods: We performed a systematic review and network meta-analysis to establish a clinically meaningful hierarchy of the efficacy and safety of medical treatments for persistent/chronic ITP in adults. Randomized controlled trials (RCTs) evaluating medical treatments were included. Reviewers independently extracted data and assessed the risk of bias. The main outcome was the overall response (platelet count ≥50×10E9/L); incidence of bleeding episodes, necessity of rescue treatments, and therapy-related adverse events including thrombosis were the secondary endpoints.

Results: A total of 12 randomized controlled trials (N=1306) were included in this study. Our main finding was an improved overall response in TPO-RA arms (both Eltrombopag and Romiplostim) compared with that of placebo (Risk ratio [RR] with 95% confidence interval [CI], 4.75 [2.49−9.07] with $p < 0.01$ and 4.21 [1.87−9.52] with $p < 0.01$, respectively) or RTX (RR with 95%CI, 3.57 [1.05−12.5] with $p = 0.04$, and 3.22 [0.85−12.5] with $p = 0.09$, respectively). There were no significant differences between Eltrombopag and Romiplostim (RR with 95%CI, 0.89 [0.33−2.41] with $p = 0.82$). Moreover, clinically significant bleeding episodes were decreased in TPO-RA arm compared with placebo. Therapy-related adverse events showed similar profiles, and were tolerable in all treatment arms.

Conclusions: TPO-RAs can be first choices for the treatment of persistent/chronic ITP, rather than RTX. Future head-to-head trials including TPO-RAs vs. RTX or Eltrombopag vs. Romiplostim are necessary to validate our study findings and determine the most suitable therapy for persistent/chronic ITP.