The Challenge of PAH Management: Effect of Online CME

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Introduction

- Pulmonary arterial hypertension (PAH) is a complex condition that is often challenging to treat, with many clinicians struggling to assess, diagnose, and appropriately manage patients.
- This study’s objective was to determine if a video-based online continuing medical education (CME) activity improved the knowledge and competence of cardiologists and pulmonologists regarding treatment of PAH.

Methods

- An online CME activity was developed as a 25-minute roundtable discussion with 4 leading experts on the current evidence base for treatment of PAH.
- The activity included a transcript of the discussion and a downloadable slide deck to highlight and reinforce key data.
- The effects of education were assessed using a linked pre-assessment/post-assessment study design for the same group of participants (Figure 1).
- For all questions combined, the McNemar’s chi-square test was used to assess differences from pre- to post-assessment. Values <.05 are considered statistically significant.
- The activity launched on June 25, 2015, and data were collected through August 7, 2015.

Results

- For both cardiologists (n=139) and pulmonologists (n=35), comparison of individually linked pre-assessment question responses to the respective post-assessment question responses demonstrates statistically significant improvements (P < .05).
- Average correct responses before the education were 45% for cardiologists and 54% for pulmonologists, compared with 66% and 72%, respectively, post-education.
- Improvements were observed pre- compared to post-education (Figure 2):
  - 47% absolute improvement for cardiologists (29% vs 76%; P < .05) and a 40% absolute improvement for pulmonologists (45% vs 85%; P < .05) in ability to switch a patient on sildenafil with worsening PAH to tadalafil and macitentan combination therapy
  - 28% absolute improvement for cardiologists (33% vs 61%; P < .05) and 17% absolute improvement for pulmonologists (80% vs 77%; P = .122) in appropriate selection of combination therapy with tadalafil and ambrodentan for a treatment-naive patient with World Health Organization (WHO) class II PAH.

Question 1

A 59-year-old man, diagnosed with pulmonary arterial hypertension (PAH) 18 months prior, presents to his pulmonary hypertension specialist for a scheduled follow-up appointment. He reports increasing functional impairment in the last 3 months and is subsequently assessed as World Health Organization (WHO) functional class III. He is currently on sildenafil-containing regimen. Which of the following agents would be the most appropriate, evidence-based next step in his treatment?

- A. Tadalafil + ambrisentan
- B. Ambrisentan
- C. Sildenafil + ambrodentan
- D. Tadalafil monotherapy

Correct: C

Question 2

A 67-year-old woman who has been diagnosed with PAH 1 month prior follows up with her pulmonary hypertension specialist to initiate treatment. She is assessed as WHO functional class II. Which of the following therapy regimens would you recommend in order to reduce her risk of clinical failure events?

- A. Ambrisentan monotherapy
- B. Tadalafil monotherapy
- C. Sildenafil + ambrodentan combination therapy
- D. Tadalafil + ambrisentan combination therapy

Correct: D

Conclusions

- The statistically significant improvements observed in this online CME roundtable discussion demonstrate the benefits of educating specialists involved in treating PAH with newly designed educational activities.
- Despite improvements in knowledge and competence, persistent educational gaps remain, warranting additional education on:
  - Initiating therapy to reduce the risk of hospitalizations and clinical worsening
  - Adjusting therapy for patients with worsening PAH

Clinical Implications

This assessment of cardiologists’ and pulmonologists’ clinical decisions identified education gaps that support the need to develop additional CME activities on PAH management in order to translate improvements in clinicians’ knowledge into clinical care and patient outcomes.

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References