QUESTION 59

A 67-year-old man with chronic obstructive pulmonary disease (COPD) has severe exertional dyspnoea and is receiving maximal inhaled bronchodilator therapy. He no longer smokes.

Lung function tests are as follows:
- Forced expiratory volume in one second (FEV₁): 0.54 L (18% predicted)
- Forced vital capacity (FVC): 2.87 L (75% predicted)
- FEV₁/FVC: 19%
- Total lung capacity (TLC): 7.96 L (121% predicted)
- Residual volume (RV): 5.09 L (245% predicted)
- Diffusing capacity for carbon monoxide (DLCO): 6.1 mL/min/mmHg (19% predicted)

Arterial blood gases on room air are as follows:
- $P_{a}O₂$: 65 mmHg
- $P_{a}CO₂$: 52 mmHg
- pH: 7.36

What is the most appropriate management to reduce this man’s exertional dyspnoea?
A. Inhaled corticosteroids.
B. Pulmonary rehabilitation program.
C. Lung volume reduction surgery.
D. Supplemental oxygen.
E. Lung transplantation.

Answer: B pulmonary rehab

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In severe COPD: smoking reduction the only effective means to affect the decline in lung function – already achieved in this patient

- Inhaled corticosteroids should be considered in patients with a documented response or those who have severe COPD with frequent exacerbations – level II evidence
- Pulmonary rehab – reduces dyspnoea, anxiety and depression, improves exercise capacity and OL and may reduce hospitalisation – level I evidence
- Lung volume reduction surgery – selected patients symptom relief – level III-2 evidence
- Supplemental oxygen – no evidence for supplemental oxygen only long term
- Lung transplantation – selected patients symptom relief – level III-2 evidence

Answer: B pulmonary rehab