Respiratory medicine SAQs

Self-assessment questions: Phenotyping chronic obstructive pulmonary disease (COPD) exacerbations: realising personalised medicine

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1 Regarding COPD:
   (a) It is predicted to be the third leading cause of death worldwide by 2030
   (b) It is diagnosed by clinical symptoms and forced expiratory volume in one second (FEV₁)/forced vital capacity (FVC) ratio <0.8
   (c) Patients all have radiological evidence of emphysema on computed tomography images
   (d) It develops in about 70% of people who smoke
   (e) Exacerbations are associated with accelerated decline in lung function
   (f) Biomass fuel exposure is a recognised cause

2 Regarding biomarkers for COPD:
   (a) Most airways inflammation in COPD is neutrophilic
   (b) C-X-C motif chemokine 10 (CXCL10) has been shown to identify bacterial exacerbations
   (c) C-reactive protein (CRP) is useful to predict the severity of COPD exacerbations
   (d) Procalcitonin has a role in identifying acute bacterial exacerbations of COPD
   (e) The eosinophil count in peripheral blood has been used as a biomarker for sputum eosinophilia

3 Regarding targeted therapy for COPD:
   (a) The phosphodiesterase-4 inhibitor roflumilast reduces exacerbations in patients with severe airways obstruction, a history of exacerbations and chronic sputum production
   (b) Lung volume reduction surgery (LVRS) is recommended for the subgroup of patients with COPD with lower lobe emphysema and a poor response to exercise therapy
   (c) Patients with sputum neutrophilia tend to respond well to corticosteroid therapy
   (d) In acute exacerbations of COPD, procalcitonin levels can be used to reduce the duration of antibiotic courses
   (e) Using peripheral blood neutrophil count to guide outpatient treatment of COPD exacerbations leads to a reduction in inappropriate oral corticosteroid prescriptions

Answers to these self-assessment questions can be found on page s92.