Given the significance of cough as a clinical problem worldwide and the paucity of safe and effective antitussive drugs, high-quality investigation in the field of cough remains a priority. The optimal clinical study should include both subjective and objective cough-specific end points, measured in appropriately selected subject populations. The availability of practical, well-validated automated cough monitors will represent a major breakthrough in clinical cough research and is awaited with great anticipation.

Competing interests: None.

Thorax 2009;**64**:372–373. doi:10.1136/thx.2008.111021

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Lung alert

Pseudomonas: is chronic infection behind acute exacerbations in COPD?

Approximately half of acute exacerbations of chronic obstructive pulmonary disease (AECOPD) are associated with bacterial infection, and *Pseudomonas aeruginosa* is increasingly recognised as an important pathogen. Up to 13% of AECOPD are associated with *P aeruginosa* in patients with severe airflow obstruction. Whether chronic infection with *P aeruginosa* predisposes to AECOPD is not entirely clear.

Sputum samples positive for *P aeruginosa* taken from 13 patients with AECOPD were compared with blood samples from 10 patients with acute bacteraemia. Eight of the patients with COPD had sequential positive samples of *P aeruginosa* at other AECOPD. Samples were molecularly typed and production of virulence factors, mutation rates and motility were investigated.

Each of the eight patients with COPD with sequential infections had established *P aeruginosa* clones. There was no indication of transmission of these clones between patients. These strains showed aspects of the characteristic evolution of chronic *P aeruginosa* infections seen in patients with cystic fibrosis (CF). Unsurprisingly, recurrent infections were linked with bacteria which were hypermutable and displayed increasing antibiotic resistance. When compared with the *P aeruginosa* isolates from blood, those from the lung produced more biofilm and were less cytotoxic and motile.

The authors have shown that expression of virulence factors differs in acute and chronic *P aeruginosa* infection. This study therefore supports others in demonstrating that *P aeruginosa* can cause a chronic infection in COPD similar to that seen in patients with CF. Using data from CF studies may provide important information on the management of this process.

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