airwaves

Wisia Wedzicha, *Editor in Chief*

SILDENAFIL AT HIGH ALTITUDE

In this issue of *Thorax* Aldashev *et al* remind us that high altitude pulmonary hypertension (HAPH) is an important public health problem, and that 140 million people live at an altitude above 2500 metres. The pathophysiology underlying HAPH is still poorly understood, but involves vascular remodelling. Phosphodiesterase (PDE) 5 is the major PDE found in pulmonary vasculature, and some earlier studies have suggested that it may have a role in pulmonary hypertension. The authors screened subjects in the mountainous Naryn region of Kyrgyzstan (altitude 2500–4000 m above sea level), and those with a raised pulmonary artery pressure were randomised to receive either the PDE5 inhibitor sildenafil at two dosages or placebo for 12 weeks. Patients receiving sildenafil at the lower dose showed a fall in pulmonary artery pressure and improvement in walking distance. The authors conclude that sildenafil, although expensive for a country with poor health resources, is a potentially useful treatment for a condition (HAPH) for which few treatments are available. Longer studies are now required to confirm these interesting findings.

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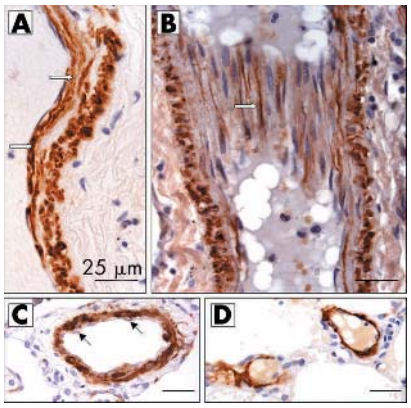

Immunohistochemical localisation of PDE5 in remodelled pulmonary vessels in a lung from a Kyrgyz highlander with high altitude pulmonary hypertension.

ASTHMA AND THE OLYMPICS

As Boulet points out in the accompanying editorial to the article by Dickinson and colleagues on the changes in the International Olympic Committee Medical Commission (IOC-MC) asthma criteria, asthma is common in athletes and there have been suggestions that it is becoming more common. To ensure that asthma medications are being used appropriately, the IOC-MC has established new criteria that include a significant bronchodilator response or positive bronchial challenge test. Dickinson and colleagues report a prevalence of asthma of 21.2% in the 2000 Great Britain Olympic team and 20.2% in 2004 using the new diagnostic criteria. Swimmers had the highest prevalence of asthma, and generally asthma was more common in elite athletes than in the general population. However, 13 of the 62 athletes with a previous diagnosis of asthma tested negative and seven with no previous history tested positive. A large proportion of athletes were therefore using unnecessary medication and the authors suggest that screening for exercise induced asthma within an elite athlete population is warranted. Boulet concludes that there is a need for more research to understand the relationships between high level exercise and asthma and the consequences of intense training on athletes.

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PATHOGEN DIRECTED APPROACH FOR PNEUMONIA?

There has been some controversy about whether a pathogen directed approach for the management of community acquired pneumonia is superior to an empirical strategy using broad spectrum antibiotics. In this month's *Thorax* van der Eerden and colleagues describe a prospective randomised open study comparing the two strategies. The results showed no significant difference in the primary outcome (length of hospital stay) or in secondary outcomes such as mortality or clinical failure. Side effects were more common in the empirical group but had no effects on outcome. The authors conclude that an empirical approach is as effective as a pathogen directed approach in pneumonia.

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BDNF AND SLEEP APNOEA

Cognitive dysfunction is common in patients with sleep apnoea, and brain derived neurotrophic factor (BDNF) is a key mediator of cognitive function and memory. In this issue Staats and colleagues show that, with CPAP (continuous positive airway pressure) treatment, systemic BDNF levels in patients with sleep apnoea showed a steep fall which suggests enhanced neuronal demand for BDNF with treatment. These results are important as they provide the basis for further studies into the mechanisms of cognitive impairment in sleep apnoea.

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NEUTROPHILS AND INFECTION IN CF

Chronic endobronchial bacterial infection is a feature of patients suffering from cystic fibrosis (CF), and in this month's *Thorax* Watt and colleagues describe an interesting study of neutrophil cell death (apoptosis) and infection. CF patients infected with *Pseudomonas aeruginosa* or *Burkholderia cenocepacia* had lower numbers of viable neutrophils, increased airway interleukin 8 levels, and increased sputum cell counts than those without infection. Thus, cell death and clearance are altered in CF patients colonised with Gram negative organisms such as *P aeruginosa* or *B cenocepacia*.

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