

### **RM-13 Down-expression of inducible nitric oxide synthase (iNOS) and endothelial (Enos) proteins and mRNA iNOS in bronchiectasis in vivo**

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**Introduction:** We have recently reported a lowering of exhaled nitric oxide (eNO) production in bronchiectasis among patients with *Pseudomonas aeruginosa* infection. The precise mechanism(s) and occurrence of reduction in eNO production, which potentially correlates ciliary beat frequency and other mechanisms for host defence in the airways, have not been investigated.

**Methods:** We have determined the expression of inducible (iNOS) and constitutive (eNOS) nitric oxide synthase (NOS) proteins including mRNA iNOS in endobronchial biopsies (EBB) obtained from 10 stable patients with idiopathic bronchiectasis (age= 54.1 ±14.4 yrs; FEV<sub>1</sub> 63.4 ±18.0%; FVC 65.6 ±18.1%; 24h sputum 12.8±1.2 ml), and 10 control subjects who underwent bronchoscopy for suspected bronchial carcinoma (age=60.6 ±11.2 yrs). Samples were fixed and processed routinely for histology under standardized protocols. Four mm paraffin sections were stained with iNOS and eNOS antibodies using DAKO Envision Kits. Intensity of immunoreactivity (luminance i.e. darker stain had lower grey scale value) was quantified using a Leica QWIN Image Analyser. Riboprobes for human iNOS were used for non-isotopic in-situ hybridization (Roche).

**Results:** Our results showed that iNOS and eNOS protein expressions were significantly down-regulated (p<0.05) in bronchiectatic mucosa (n=10; 175.5±2.1; 168.6±2.3 respectively) when compared with controls (145.2±2.5; 145.5±2.2). mRNA iNOS expression was lower in the bronchiectasis than in control non-bronchiectasis.

**Conclusions:** We conclude that iNOS and eNOS expressions are down-expressed in stable bronchiectasis patients. This down-regulation of eNO production is theoretically related to chronic infective state of the bronchiectatic airways, and has major implications in the pathogenesis of bronchiectasis. This interesting phenomenon should be explored further.

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### **RM-14 Why do family doctors prescribe antibiotics for upper respiratory tract infection?**

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**Introduction:** Upper respiratory tract infection (URTI) is the commonest condition for patients to attend their doctors. The prescribing behaviours of family doctors in Hong Kong towards URIs and the major clinical factors which might affect these behaviours were studied.

**Methods:** Members of the Hong Kong College of Family Physicians were surveyed between August and December 2001 and 801 of them completed the questionnaire with an overall response rate of 65.0%.

**Results:** Purulent nasal discharge, purulent sputum, persistent fever over 3 days, patients looking unwell, exudates on throat, inflamed eardrum and cervical lymphadenopathy made over half of the respondents likely or very likely to prescribe antibiotics for URIs. Those in private practice and those who graduated from Hong Kong were more likely to prescribe antibiotics while those who had obtained fellowship of the College were less likely to do so. Vocational training and higher qualifications in family medicine/general practice however revealed minimal effect.

**Conclusion:** Our results showed that many doctors are still prescribing antibiotics when they encounter URTI patients presenting with clinical factors which have been proven to have no or little benefits from antibiotics.

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