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Anti-Inflammatory Treatment Increased Exhaled Nitric Oxide Production on Patients with Active Bronchiectasis

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Introduction: Endogenous nitric oxide (NO) metabolism appears to be involved in the pathogenesis of many respiratory, renal, neurological and liver diseases. We have recently shown that exhaled (e)NO production is not significantly different between healthy volunteers and patients with bronchiectasis, except those with chronic *Pseudomonas aeruginosa* (PA) infection had significantly lower eNO than their counterparts and controls. While eNO is reduced by treatment with inhaled corticosteroid in asthma, the effects of such treatment on eNO in patients with bronchiectasis, who also have significant airway inflammation, is unknown.

Methods: Exhaled NO was measured by using an automatic chemiluminescence analyzer (Sievers NO Analyser280) at steady expiration on 34 stable patients with bronchiectasis, who received either fluticasone 500μg BID (n=18, 9F, 54.1 ± 16.1yr, PA infection n=6) or matched placebo (n=16, 13F, 52.7 ± 15.8yr, PA infection n=7). Patients with sputum volume >10ml/24h at steady state were regarded as having active bronchiectasis. The difference from baseline data was calculated for the visits at 4, 12, 24 and 36 weeks for both treatment groups.

Results: Patients with sputum volume >10ml/24h and treated with fluticasone had no significant difference in eNO at 4-week (-0.0 ± 12.9) and 12-week (2.6 ± 13.4) from controls (1.8 ± 10.6, p=0.65; -3.9 ± 11.6, p=0.13 respectively). However, patients in the fluticasone group had significantly higher eNO, compared with baseline, than the control patients at 24- (0.3 ± 11.6, -8.9 ± 13.4, p=0.04), and 36-week (1.1 ± 9.2, -6.9 ± 11.6, p=0.03). Patients with sputum volume <10ml/24h, in both treatment groups, had no significant differences in eNO at all visits (p>0.05).

Conclusion: Our recent demonstration of the efficacy of inhaled corticosteroid therapy in active bronchiectasis appears to be accompanied by a stablization of eNO, compared with progressive reduction of eNO when on placebo treatment. Our results not only suggest that eNO could be useful in monitoring response to treatment, but also reflect the differences in the pathogenesis of asthma and bronchiectasis, despite both being inflammatory airway diseases.

C-RC-11

***Coriolus Versicolor* Yun-Zhi Could Delay Deterioration on Patients with Advanced Non-Small Cell Lung Cancer**

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Introduction: Non-small cell lung cancer (NSCLC) is the commonest cause of cancer death in Hong Kong and the vast majority of most patients present in advanced stages rendering little treatment options other than palliative radiotherapy and chemotherapy. Although there are no data on the usage of alternative medicine in NSCLC, it is widely believed that a very significant proportion of patients undertake alternative treatment. Yun Zhi (YZ), *Coriolus Versicolor cov-1*, has been hailed as having anti-cancer effects, and anecdotal experience also suggests that YZ might alleviate symptoms in terminal cancer patients and have anti-cancer effects. However, this has not been investigated in a controlled manner.

Methods: We have, therefore, performed this double-blind placebo-controlled randomized study to evaluate the effects of 3-day administration of YZ (3 capsules TDS) on patients with advanced NSCLC, who have completed standard treatment with chemotherapy and/or radiotherapy.

Results: 34 patients were recruited into each of the the YZ (n=34; 11F; age 61.3 ± 11.3 yr; and TNM II 1, IIB 1, IIIA 1, IIIB 10, IV 18) and placebo (PG; n=34; 11F; age 55.3 ± 10.7 yr; and IIIA 1, IIIB 12, IV 18)) arms. The two arms did not differ in their previous treatment with chemotherapy, radiotherapy or surgery (0>0.05). No adverse reaction was reported by either treatment group attributable to the trial medications. Altogether 10 patients could not complete the study due to clinical deterioration. Of these, 2 cases were from YZ and 8 from PG (p=0.03). There was no significant difference in the body mass index (p=0.78), total calorific intake (0.58), Global Health Status (0.77), quality of life parameters of EORTC-C13 (>0.05), although YZ treatment was associated with improvement in total leucocyte count in blood (0.003) and body fat content (0.02) after treatment.

Conclusion: Our preliminary data appear to show that YZ treatment could be associated with slower deterioration in the clinical course of patients with advanced NSCLC, and have no adverse reactions. Our results not only suggest that further clinical trials should be conducted on the effects of YZ on NSCLC, but also represent pioneering efforts in the study of the application of traditional Chinese medicine using gold standard clinical trial criteria.