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THE EFFECTS OF PSEUDOMONAS AERUGINOSA INFFECTION ON SPUTUM ELASTASE

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Neutrophil elastase (NE), a powerful protease released by neutrophils, has been implicated in the pathogenesis of bronchiectasis by its capabilities in destroying the airway matrix, damaging bronchial epithelial cells, and reducing the ciliary beat frequency of respiratory epithelium. Because *Pseudomonas Aeruginosa (P.A.)* frequently colonizes the repiratory tract in bronchiectasis, we examined the effects of *P.A.* infection on sputum NE production amongst patients with bronchiectasis. Sputum was collected from 25 bronchiectasis patients (17 with *P.A.* infection), and ultracentrifuged at 100,000g for 30 min at 4°C to separate the sol and gel phase. The sol phase was stored at -70°C until NE assay. Sputum sol elastase levels were determined by using photometric absorption of the final mixture of sputum sol with succinyl-L-alanyl-L-alanine-p-nitroanilide and comparing with standard curves on the rate of changes in optical density determined at 410 nm as units (U)/ml. Sputum sol NE was significantly raised in bronchiectasis patients who had *P.A.* infections (222.6 U/ml, range 1.6-334) compared with non-*P.A.* infected patients (8.7 U/ml, range 0.6-249.6; $p<0.05$). Our findings of higher sputum levels of NE in bronchiectasis infected by *P.A.* provides further understanding in the pathogenesis in bronchiectasis particularly in the continued airway destruction.

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CUMMULATIVE DISEASE DAMAGE IN SOUTHERN CHINESE PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS (SLE).

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Objective: To study the pattern of SLICC/ACR damage index score in patients with SLE in Hong Kong.
Method: SLE patients who attended a specialist lupus clinic were studied. Their case records were reviewed and demographic data collected. The SLICC/ACR damage index was scored at 6-monthly intervals.
Results: 179 patients (F:M = 170:9) were studied. The mean age of onset was 28.5 (10-67) years and the mean duration of disease was 6.1 (0.5-24.5) years. 40 patients had a SLICC/ACR damage score (DS) ≥ 1 (1-4). The mean total DS score at 1, 3, 5 and 10 years were 0.048, 0.149, 0.189 and 0.460 respectively. DS did not correlate with the age of disease onset ($r= -0.09$, $p=0.236$) and genders (mean score: male 0.11; female 0.34; $p=0.38$). Anti-Sm, anti-nRNP, anti-Ro and anti-La positivity were not related to morbidity outcome both in the mean total score and DS per patient-year. The 3 most commonly involved organ systems were musculoskeletal (27.5%), renal (25%) and neuropsychiatric (20%). There was no DS in the cardiovascular system. Only a small proportion of patients had DS in the peripheral vascular (2.5%), pulmonary (5%) and gastrointestinal (5%) systems. The DS per patient-year was subdivided into those attributable to the disease process or secondary to treatment and was analyzed at 5-yearly intervals.

	0.5-5 year	5.5-10 year	10.5-15 year	15.5-20 year
Disease related	0.0538	0.1593	0.0779	0.0571
Treatment related	0.0336	0.1062	0.1039	0.1143

Conclusion: This is the first report of SLICC/ACR damage index in a group of southern Chinese patients. Contrary to reports from Western countries, our patients had a lower mean total DS at 5 and 10 years. The musculoskeletal and renal systems were particularly involved while the cardiovascular system was spared. Anti-ENA antibodies did not predict for disease morbidity. Damages attributable to the disease process were highest between 5-10 years of disease onset, while treatment related damages were higher after the first 10 years. Control of disease process and avoidance of treatment related complications are equally important in improving SLE morbidity.