



<b>Title</b>	<b>Actinobacillus actinomycetemcomitans isolated from young Chinese adults with aggressive periodontitis</b>
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# ***Actinobacillus actinomycetemcomitans* isolated from young Chinese adults with aggressive periodontitis**

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Objectives: To characterize *A. actinomycetemcomitans* isolates from young Chinese aggressive periodontitis patients. Methods: Subgingival plaque samples (2/subject) were collected from untreated diseased subjects < 25 yr (n = 9, 21.1 ± 1.6 yr) and age- and sex-matched periodontitis-free controls (n = 47, 22.0 ± 1.1 yr). Selective (TSBV agar) and anaerobic culture were used. The serotype, leukotoxin gene (*ltx*) operon promoter, and the cytolethal distending toxin (*cdt*) genes complex of the *A. actinomycetemcomitans* isolates were studied. Results: Diseased subjects had significantly higher full-mouth bleeding scores ( $p=0.002$ ) and total viable counts ( $7.2 \times 10^6$  vs  $2.1 \times 10^5$  c.f.u.,  $p<0.005$ ). *A. actinomycetemcomitans* was isolated from 67%/56% or 6%/4% of diseased or control subjects/sites, respectively ( $p<0.001$ ). The proportion of *A. actinomycetemcomitans* isolatable from both diseased and periodontitis-free was low (0.7% vs 0.1%,  $p<0.02$ ). Among the 10 disease and 4 control *A. actinomycetemcomitans* isolates characterized, 8 were serotype c, 3 serotype f, 2 serotype a and 1 serotype b, and all possessed 652-like *ltx* gene promoter; furthermore all but one from diseased patients had intact *cdtABC* genes. Conclusion: This study confirmed increased prevalence and quantity of *A. actinomycetemcomitans* in aggressive periodontitis Chinese patients. The *ltx* promoter and *cdt* characteristics of the *A. actinomycetemcomitans* isolates, however, were similar among the diseased and control groups.

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