

題名:Comparison of prevalence of virulence factors for *Klebsiella pneumoniae* liver abscesses between isolates with capsular K1/K2 and non-K1/K2 serotypes.

作者:余文良

Yu WL; Ko WC; Cheng KC; Lee CC; Lai CC; Chuang YC

貢獻者:醫學系內科學科

上傳時間:2009-08-11T05:50:08Z

摘要:Hypermucoviscosity, *rmpA* (regulator of mucoid phenotype), aerobactin (an iron siderophore), *kfu* (an iron uptake system), *allS* (associated with allantoin metabolism), and K1/K2 capsules are important virulence determinants in *Klebsiella pneumoniae* for liver abscesses. We determined the prevalence of these virulence factors of 50 nonrepeat *K. pneumoniae* isolates recovered from patients with primary liver abscesses who were treated at 2 medical centers in Taiwan. Virulence genes were surveyed by polymerase chain reaction analysis. The prevalence of hypermucoviscosity phenotype, plasmid-born *rmpA*, aerobactin, *kfu*, and *allS* genes revealed 96%, 100%, 100%, 100%, and 100% in 26 capsular K1 isolates; 90%, 100%, 100%, 0%, and 0% in 10 K2 isolates; and 79%, 86%, 93%, 50%, and 0% in 14 non-K1/K2 isolates; respectively. When injected into mice intraperitoneally, regardless of any capsule K serotype, *K. pneumoniae* isolates with hypermucoviscosity phenotype as well as presence of *rmpA* and aerobactin genes exhibited high virulence for mouse lethality (LD(50), <10(2) CFU). Without significant difference in the prevalence of expressing hypermucoviscosity phenotype and carriage of *rmpA* and aerobactin genes, these virulent non-K1/K2 isolates are as capable as K1/K2 isolates of causing primary liver abscesses.