Distribution of CBP genes in Streptococcus pneumoniae isolates in relation to vaccine types, penicillin susceptibility and clinical site.

ABSTRACT

Choline-binding proteins (CBP) have been associated with the pathogenesis of Streptococcus pneumoniae. We screened, using PCR, for the presence of genes (cbpA, D, E, G) encoding these proteins in 34 isolates of pneumococci of known serotypes and penicillin susceptibility from invasive and non-invasive disease. All isolates harboured cbpD and cbpE whereas cbpA and cbpG were found in 47% and 59% respectively; the latter were more frequent in vaccine-associated types and together accounted for 77% of these isolates. No association was observed with penicillin susceptibility but 85% of non-invasive isolates were positive for these genes.

Keyword: Choline-binding proteins (CBP); Streptococcus pneumoniae; Penicillins; Pneumococcal vaccines; Genes.