

Abstract

Amplification of DNA fragments surrounding rare restriction sites (ADSRRS) is a newly developed method for rapid analysis of pathogen genetic variation in high resolution. We have adopted an ADSRRS procedure from that was adopted for vancomycin-resistant *Enterococcus faecium* to analyze *B. pertussis* strains collected by CDC. The amplified products in pertussis ADSRRS profiles were clustered in the range from 100 ~ 1000 bp. Based on five polymorphic bands identified, the analyzed strains may be divided into five subtypes. Among all strains examined, 11 clinical strains revealed a fairly high genetic homology (with 88% to 100% similarity) to that from three vaccine strains, i.e. ATCC9340, Tohama, and BP10536. In addition, the strains BP9211010, BP2827, BP9212012 seemed to genetically diverse from other strains according to the similarity analysis. Together with the typical method PFGE, ADSRRS should represent an auxiliary procedure for a subtle analysis of pathogens.

Keywords : DNA fingerprinter ; bacterial typing techniques ; genetic variation