Molecular characterization of the transferable resistance to amikacin in Enterobacteriaceae strains isolated from hospital infections Caracterización a nivel molecular de la resistencia transferible a amikacina en cepas de Enterobacteriaceae aisladas de i

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Sixty-three amikacin resistant strains of Enterobacteriaceae isolated in three hospitals from Santiago, between 1988 and 1990 were included in this study. The strains were multiresistant and harbored 1-5 plasmids. Fifty six isolates (88.9%) transferred amikacin resistance to E coli C600 receptor strain by conjugation. The transconjugants acquired a 11 kilobase-pair or a larger plasmid. The plasmids also encoded resistance to kanamycin, tobramycin, streptomycin and ampicillin. A DNA probe from the gene AAC (6')-I encoding an aminoglycoside 6'-N-acetyltransferase, AAC (6')-I hybridized in Southern blot with plasmid DNA of the 10 Enterobacteriaceae strains tested, but not with the plasmid DNA of 8 amikacin resistant clinical strains of A baumannii. The results indicate that amikacin resistance in Enterobacteriaceae is due mainly to conjugative plasmids encoding an AAC (6')-I.