Molecular Epidemiology of Methicillin-resistant *Staphylococcus aureus* in Children: Comparison between Cystic Fibrosis and Non-cystic Fibrosis Isolates

Sir,

We have previously reported, elsewhere and separately, the molecular and phenotypical characteristics of methicillin-resistant *Staphylococcus aureus* (MRSA) isolates from cystic fibrosis patients and from non-cystic fibrosis patients.[1,2] We aimed to perform a molecular comparison between the isolates from the two groups, using pulsed field gel electrophoresis (PFGE).

Thirty seven MRSA isolates were included, nine from cystic fibrosis patients (respiratory secretion), and 30 from non-cystic fibrosis, hospitalized patients (from

various anatomical sites). One patient with cystic fibrosis and three patients without cystic fibrosis had two isolates included each. Of the 39 isolates, one carried SCC*mec* type I, three SCC*mec* type II, 19 SCC*mec* type III, and 16 SCC*mec* type IV. DNA restriction patterns after digestion were analysed by PFGE, which was performed as described previously.[3] Results were compared using the GelComparII software (Applied Maths, Kortrijk, Belgium), based on published criteria.[4]

Cystic fibrosis isolates were similar to non-cystic fibrosis isolates. We observed clustering within SCC*mec* types (notably types III and IV, that were more numerous), but not within groups of isolates (cystic fibrosis versus non-cystic fibrosis). Most type III isolates had patterns typical of the Brazilian clone, whereas the majority of type IV isolates were at least similar to the SCC*mec* IV pediatric clone. These findings suggest that the local of acquisition of MRSA isolates could be the same (probably the hospital) for most of the cystic fibrosis and non-cystic fibrosis patients. Prospective studies with a higher number of isolates are necessary to clarify the details of the epidemiological relationship between MRSA isolates in these patients.

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