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MRSA - one health worldwide

Survey of resistance of *S. aureus* strains isolated in urinary infections from 2008 to 2014, in the French community

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Background: MedQual, a French network, follows the susceptibility of bacterial strains isolated from community-acquired infections. Survey was carried out by a growing number of medical analysis laboratories (MAL) over a 7-years period.

Material/methods: All the strains of *S.aureus* isolated in these laboratories were included in the investigation, allowing us to follow the evolution of susceptibility in the urinary infections in *S. aureus* from 2008 to 2014. All patients from private hospitals and emergency departments were excluded.

Results: 9 546 antibiograms were collected. All the strains were isolated from urine. In 2008, the average age of the patients was 67 years old (68 in 2014). The evolution of the resistance (%) to antibiotics for *S. aureus* (2008-2014) was reported in the table. 3340 methicillin-resistant *S.aureus* (MRSA) strains were isolated. During the study period, a significant diminution of the resistance to oxacillin was observed, 43.4% in 2008 to 35.4% in 2014 ($p=0.001$). The resistance to fluoroquinolones decreased from 55.5% in 2008 to 42.2% in 2014 ($p<0.001$). This diminution of resistance to fluoroquinolones was observed only for methicillin-sensible *Staphylococcus aureus* (MSSA): 24.7% vs 13.2%, $p<0.001$. The resistance to erythromycin for *S.aureus* decreased during the study period (30.2% vs 24.4% in 2014, $p=0.013$), but was relatively stable over the studied period for MSSA (23.6% vs 22.8%, NS) and decreased for MRSA (39.5% vs 27.1%, $p<0.001$). The resistance to aminosides and fosfomycin decreased significantly for *S.aureus* over a 7-years period. The resistance to trimethoprim-sulfamethoxazole remains very low since 2008 (1.3% in 2014).

Conclusions: The survey of the evolution of resistance for these strains isolated in the community allows us a significant decrease of resistance to fluoroquinolones for *S.aureus*. As a whole, resistances are really lowly in 2014 than those observed in 2008.