Current epidemiology of Staphylococcus aureus with decreased susceptibility to glycopeptides (vancomycin and teicoplanin) in France

For over 30 years vancomycin has been considered as the antibiotic of first choice for treatment of infections with methicillin resistant Staphylococcus aureus (MRSA). In May 1996, the first infection with vancomycin-intermediate S. aureus (VISA, minimum inhibitory concentration [MIC] = 8 µg/mL) was reported in a patient in Japan (1). Subsequently, infections with isolates of MRSA with decreased or intermediate susceptibility to glycopeptides (footnote) have been reported in the United States, Europe, and Asia. Such strains were first documented in France in 1992 (2, 3) and spread in a French hospital was reported in 1999 (4). Experts on MRSA met in December 1999 to review the emergence of such strains in France and to discuss the implications for epidemiological surveillance (5).

The percentage of MRSA with decreased susceptibility to glycopeptides in France ranges from 1% to 25%, depending on the hospitals and the regions. Two outbreaks of MRSA strains with decreased or intermediate susceptibility to glycopeptides illustrate the situation. An outbreak (79 cases (defined as a patient colonised or infected by a strain of MRSA with decreased or intermediate susceptibility to glycopeptides) recorded from October 1998 to March 1999) of such strains arose in a hospital in Paris in October 1998. In the first quarter of 1999, 13 cases of such strains occurring in a hospital in the Paris area prompted the reinforcement of measures intended to control transmission of MRSA (6). MRSA with diminished susceptibility to glycopeptides seem more likely to emerge in hospitals where MRSA is endemic and where the selective pressure exerted by the use of glycopeptides is high. Sales of oral vancomycin in France remained stable from 1990 to 1999 but sales of injectable vancomycin and teicoplanin have doubled since 1990.

What is the extent of the problem and its potential evolution? Standardised techniques are needed to estimate the incidence of MRSA strains with decreased or intermediate susceptibility to glycopeptides and the percentage among these isolates, to follow the evolution of these two indicators in France. The difficulty is that the phenotypic definition varies, that the resistance mechanisms remain unknown, and that there is no simple and standardised technique for their routine detection. The Comité de L'Antibiogramme de la Société Française de Microbiologie is developing recommendations for techniques to detect and confirm VISA.

Neither clinical nor epidemiological data allow us to suggest that the virulence of S. aureus with decreased or intermediate susceptibility to teicoplanin or vancomycin differs from that of other MRSA. A prospective study of the outcome of patients infected with these strains is planned in order to assess their clinical impact. European countries that are also concerned by this problem

should take part in these studies.

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