

Abstract:

Methicillin/oxacillin resistance of 10 *S. intermedius* strains was investigated by conventional and molecular methods. The strains tested had been isolated in Germany during routine veterinary microbiological examinations of specimens from a small animal clinic between May and September 2005. Epidemiological relationships of the strains were studied by macrorestriction analysis of their chromosomal DNA using pulsed field gel electrophoresis (PFGE). Species identity of the 10 *S. intermedius* strains was confirmed by conventional methods and by PCR mediated amplification of *S. intermedius* specific segments of thermonuclease encoding gene *nuc*. As controls, four methicillin/oxacillin resistant *S. intermedius* (MRSI) strains obtained from specimens sent by four veterinarians and three selected methicillin/oxacillin sensitive *S. intermedius* (MSSI), also obtained from the small animal clinic, were tested. The 10 strains, representing approximately 6% of all *S. intermedius* isolated from the clinic throughout the time period mentioned above, and the four MRSI obtained from veterinarians, were methicillin/oxacillin and penicillin resistant using disk diffusion tests and could be cultivated on oxacillin resistant screening agar base (ORSAB). Both resistances could be confirmed by multiplex PCR detecting the resistance genes *mecA* and *bla_Z*