

- Eur J Clin Microbiol Infect Dis* 1990;9:649-653.
21. Blumberg HM, Rimland D, Kiehlbauch JA, Terry PM, Wachsmuth IK. Epidemiologic typing of *Staphylococcus aureus* by DNA restriction fragment-length polymorphisms of rRNA genes: elucidation of the clonal nature of a group of bacteriophage-nontypeable, ciprofloxacin-resistant, methicillin-susceptible *S aureus* isolates. *J Clin Microbiol* 1992;30:362-369.
 22. Prevost G, Jaulhac B, Piemont Y. DNA fingerprinting by pulsed-field gel electrophoresis is more effective than ribotyping in distinguishing among methicillin-resistant *Staphylococcus aureus* isolates. *J Clin Microbiol* 1992;30:967-973.
 23. Swaminathan B, Matar GM. Molecular typing methods. In: Persing DH, Smith TF, Tenover FC, White TJ, eds. *Diagnostic Molecular Microbiology: Principles and Applications*. Washington DC: American Society for Microbiology; 1994:26-50.
 24. Venezia RA, Harris V, Miller C, Peck H, San Antonio M. Investigation of an outbreak of methicillin-resistant *Staphylococcus aureus* in patients with skin disease using DNA restriction patterns. *Infect Cont Hosp Epidemiol* 1992;13:472-476.
 25. Fang FC, McClelland M, Guiney DG, et al. Value of molecular epidemiologic analysis in a nosocomial methicillin-resistant *Staphylococcus aureus* outbreak. *JAMA* 1993;270:1323-1328.
 26. van Belkum A, Bax R, Peerbooms P, et al. Comparison of phage typing and DNA fingerprinting by polymerase chain reaction for discrimination of methicillin-resistant *Staphylococcus aureus* strains. *J Clin Microbiol* 1993;31:798-803.
 27. Trilla A, Marco F, Moreno A, et al. Clinical epidemiology of an outbreak of nosocomial infection caused by *Staphylococcus aureus* resistant to methicillin and aminoglycosides: efficacy of control measures. *Med Clin (Barc)* 1993;100:205-209.
 28. Craven DE, Reed C, Kollisch N, et al. A large outbreak of infections caused by a strain of *Staphylococcus aureus* resistant to oxacillin and aminoglycosides. *Am J Med* 1981;71:53-58.
 29. Noel GJ, Kreiswirth BN, Edelson PJ, et al. Multiple methicillin-resistant *Staphylococcus aureus* strains as a cause for a single outbreak of severe disease in hospitalized neonates. *Pediatr Infect Dis* 1992;11:184-188.
 30. Nicole LE, Bialkowska-Hobrzanska H, Romance L, Harry VS, Parker S. Clonal diversity of methicillin-resistant *Staphylococcus aureus* in an acute-care institution. *Infect Control Hosp Epidemiol* 1992;13:33-37.
 31. Trilla A, Nettleman MD, Hollis RJ, Fredrickson M, Wenzel RP, Pfaller MA. Restriction endonuclease analysis of plasmid DNA from methicillin-resistant *Staphylococcus aureus*: clinical application over a three-year period. *Infect Control Hosp Epidemiol* 1993;14:29-35.

MRSA Outbreak Within a Family

by Gina Pugliese, RN, MS
Medical News Editor

Dr. A. J. Simpson and colleagues at St. Bartholomew's Hospital in London, England, recently reported an outbreak within a family of serious infection with methicillin-resistant *Staphylococcus aureus* (MRSA), including two cases of endocarditis related to injectable drug use.

The first case was an 8-year-old child who had a grommet insertion and an ear swab that grew MRSA that also was resistant to erythromycin. Eight months later, the 33-year-old

mother of the child presented with a pain in her leg. She had been hospitalized 2 years earlier with cellulitis. Blood cultures grew MRSA, and an echocardiogram showed vegetation on the aortic and mitral valves. She subsequently developed septic arthritis of the hip and navicular osteomyelitis due to MRSA. Four months later, the 36-year-old husband of case 2 presented with rigors, and blood cultures grew MRSA with the same antibiogram and phage-typing patterns as the isolates from the wife and son. He was suspected to have endocarditis, and a repeat echocar-

diogram after 4 weeks showed vegetation on the mitral valve.

This is believed to be the first reported outbreak of MRSA within a family. The original source of the MRSA is unclear. It is possible that either the mother or the son may have acquired the organism in the hospital, but dissemination within families is thought to be a rare event.

From: Simpson AJH, Anderson JR, Farfan GA. Family infection with methicillin-resistant *Staphylococcus aureus*. *Lancet*. 1995;36:914.