

Medical News

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Outbreak of *Mycobacterium xenopi* After Spinal Infections

Astagneau and coinvestigators from Paris report on an outbreak of *Mycobacterium xenopi* spinal infections diagnosed in 1993 in patients who had undergone surgical microdiscectomy for disc hernia, by nucleotomy or microsurgery, in a private hospital. Contaminated tap water, used for rinsing surgical devices after disinfection, was identified as the source of the outbreak. Several cases were recorded in the 4 years after implementation of effective control measures because of the long time between discectomy and case detection. The national health authorities decided to launch a retrospective investigation in patients who were exposed to *M. xenopi* contamination in that hospital. Mailing and media campaigns were undertaken concurrently to trace exposed patients for spinal infections. Patients were screened by magnetic resonance imaging (MRI), and the scans were reviewed by a radiologist who was unaware of the diagnosis. Suspected cases had discovertebral biopsy for histopathological and bacteriological examination.

Of 3,244 exposed patients, 2,971 (92%) were informed about the risk of infection, and 2,454 (76%) had an MRI. Overall, 58 cases of *M. xenopi* spinal infection were identified (overall cumulative frequency, 1.8%), including 26 by the campaign (mean delay in detection, 5.2 years; standard deviation, 2.4; range, 1-10 years). Multivariate analysis showed that the risk of *M. xenopi* spinal infection was related to nucleotomy and a high number of patients per operating session. The authors' interpretation was that failures in hygiene practices could result in an uncontrolled outbreak of nosocomial infection. Patients who have been exposed to an iatrogenic infectious hazard should be screened promptly and receive effective information.

FROM: Astagneau P, Desplaces N, Vincent V, Chicheportiche V, Botherel A, Maugat S, et al. *Mycobacterium xenopi* spinal infections after discovertebral surgery: investigation and screening of a large outbreak. *Lancet* 2001;358:747-751.

Contamination of Tourniquets Used for Venipuncture

Rourke and colleagues, from Royal Hallamshire Hospital in the United Kingdom, conducted a study on microbial contamination of tourniquets. Previous studies have indicated that tourniquets may act as reservoirs of pathogenic organisms and therefore could pose a risk to patients through cross-infection. In this study, 200 tourniquets were sampled from health professionals working in a

large teaching hospital. A parallel survey of control of infection also was undertaken.

Staphylococcus aureus was isolated from 10 (5%) of the tourniquets sampled. Methicillin-resistant *S. aureus* (MRSA) was not isolated. Seventy-five (37.5%) of the tourniquets sampled had visible blood stains. House officers (72.7%) and laboratory phlebotomists (69.2%) had the highest proportion of blood-stained tourniquets. Tourniquets were owned on average for 1.86 years, with most respondents only obtaining a new tourniquet when the old tourniquet was lost. Three percent of respondents used a separate tourniquet for patients with known infective risk factors (eg, human immunodeficiency virus, MRSA). Twenty-seven percent of respondents did not wear gloves for venepuncture or did so only occasionally. Only 42% washed their hands both before and after venepuncture.

The study survey revealed poor infection control practice, but a relatively low frequency of *S. aureus* contamination of tourniquets.

FROM: Rourke C, Bates C, Read RC. Poor hospital infection control practice in venepuncture and use of tourniquets. *J Hosp Infect* 2001;49:59-61.

MRSA in Patients Undergoing Major Amputation

Grimble and coinvestigators from the Royal Berkshire Hospital, Reading, United Kingdom, conducted a study to examine the impact of methicillin-resistant *Staphylococcus aureus* (MRSA) infection on patients undergoing major amputation. The study included patients having had major amputation and positive MRSA cultures during the period January 1995 through December 1999. Outcomes were compared with a randomly chosen group of patients who had major amputation but no positive MRSA culture from the same time period.

Overall, 21% of patients undergoing amputation were MRSA-positive. Twenty-eight patients (30 amputations) with MRSA-positive cultures were compared with 44 patients (54 amputations) who did not have positive cultures for MRSA. MRSA was isolated from the wound in 17 of 30 amputations. More patients in the control group had a below-knee amputation (38/54 compared with 12/30; $P < .02$). Mortality in MRSA-positive patients was higher than controls (12/28, 43%, vs 4/44, 9%; $P < .01$). Primary healing was achieved in only 4 of 17 (24%) amputations where MRSA was isolated from the wound, compared with 31 of 54 (57%) controls ($P < .05$). Delayed healing due to chronic infection also was more likely in MRSA-positive patients ($P < .01$).