

The authors concluded that, in view of the high morbidity and mortality in patients with MRSA-positive isolates, specific antibiotic prophylaxis against MRSA should be considered in patients undergoing major amputation.

FROM: Grimble SA, Magee TR, Galland RB. Methicillin-resistant *Staphylococcus aureus* in patients undergoing major amputation. *Eur J Vasc Endovasc Surg* 2001;22:215-218.

***Staphylococcus aureus* Bacteremia Associated With Pacemakers and Implantable Defibrillators**

Although cardiac device infections (CDIs) are a devastating complication of permanent pacemakers or implantable cardioverter-defibrillators, the incidence of CDI in patients with bacteremia is not well defined. Chamis and coinvestigators, from the Duke University Medical Center, Durham, North Carolina, conducted a study to determine the incidence of CDI among patients with permanent pacemakers or implantable cardioverter-defibrillators who develop *Staphylococcus aureus* bacteremia (SAB).

A cohort of all adult patients with SAB and permanent pacemakers or implantable cardioverter-defibrillators over a 6-year period was evaluated prospectively. The overall incidence of confirmed CDI was 15 of 33 (45.4%). Confirmed CDI occurred in 9 of the 12 patients (75%) with early SAB (<1 year after device placement). Fifteen of 21 patients (71.5%) with late SAB (\geq 1 year after device placement) had either confirmed (6/21, 28.5%) or possible (9/21, 43%) CDI. In 60% of the patients (9/15) with confirmed CDI, no local signs or symptoms suggesting generator pocket infection were noted.

The authors concluded that the incidence of CDI among patients with SAB and cardiac devices is high. Neither physical examination nor echocardiography can exclude the possibility of CDI. In patients with early SAB, the device is usually involved, and approximately 40% of these patients have obvious clinical signs of cardiac-device involvement. Conversely, in patients with late SAB, the cardiac device rarely is the initial source of bacteremia, and there is a paucity of local signs of device involvement. The cardiac device is involved, however, in 28% or more of these patients.

FROM: Chamis AL, Peterson GE, Cabell CH, Corey GR, Sorrentino RA, Greenfield RA, et al. *Staphylococcus aureus* bacteremia in patients with permanent pacemakers or implantable cardioverter-defibrillators. *Circulation* 2001;104:1029-1033.

Influenza Outbreak in a Transplant Unit

Although there is a strong body of evidence in favor of influenza virus immunization in solid-organ recipients, little attention has been devoted to other reservoirs, such as the patients' relatives and, at the time of hospital admission, healthcare workers. Malavaud and coinvestigators from

France report on an analysis of the epidemiology of an outbreak of nosocomial influenza A in a solid-organ transplant unit. Four cases of influenza A virus infection were reported during a short 4-day outbreak in a 12 single-room transplant unit. None of the patients had been immunized against influenza. Three patients had not been visited by their relatives between admission and influenza infection. Three nurses, among the 27 healthcare workers, presented with clinical flu symptoms at times consistent with nosocomial transmission.

Because the prevention of influenza infection by vaccination warrants a global strategy to target the different reservoirs, the authors suggest that the modern policy of vaccinating solid-organ patients should be extended both to their relatives and to the healthcare workers of transplant units.

FROM: Malavaud S, Malavaud B, Sandres K, Durand D, Marty N, Icart J, et al. Nosocomial outbreak of influenza virus A (H3N2) infection in a solid organ transplant department. *Transplantation* 2001;72:535-537.

Risk Factors for Mortality and Nosocomial Infections in Elderly Cardiac Surgery Patients

Rady and coinvestigators, from the Cleveland Clinic Foundation, conducted an inception cohort study to determine perioperative predictors of morbidity and mortality in patients \geq 75 years of age after cardiac surgery. The setting was a 54-bed, tertiary-care, cardiothoracic intensive care unit (ICU); the study included all patients aged \geq 75 years admitted over a 30-month period for cardiac surgery. Data were collected on preoperative factors, operative factors, postoperative hemodynamics, and laboratory data obtained on admission and during the ICU stay.

Postoperative death, frequency rate of organ dysfunction, nosocomial infections, length of mechanical ventilation, and ICU stay were recorded. During the study period, 1,157 (14%) of 8,501 patients \geq 75 years of age had a morbidity rate of 54% (625/1,157 patients) and a mortality rate of 8% (90/1,157 patients) after cardiac surgery. Predictors of postoperative morbidity included preoperative intra-aortic balloon counterpulsation, preoperative serum bilirubin of >1.0 mg/dL, blood transfusion requirement of >10 units of red blood cells, cardiopulmonary bypass time of >120 minutes (aortic cross-clamp time of >80 minutes), return to operating room for surgical exploration, heart rate of >120 beats/min, requirement for inotropes and vasopressors after surgery and on admission to the ICU, and anemia beyond the second postoperative day.

Predictors of postoperative mortality included preoperative cardiac shock, serum albumin of <4.0 g/dL, systemic oxygen delivery of <320 mL/min/m² before surgery, blood transfusion requirement of >10 units of red blood cells, cardiopulmonary bypass time of >140 minutes (aortic cross-clamp time of >120 minutes), subsequent return to the operating room for surgical exploration, mean arterial pressure of <60 mm Hg, heart rate of >120 beats/min, cen-