Papers Presented at the 2007 Meeting of the Musculoskeletal Infection Society

Editorial Comment

Montri D. Wongworawat MD, George Cierny III MD

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Surgical site infections (SSI) are the third most common nosocomial infection in the United States and are associated with substantial morbidity, mortality and expense. These infections account for 38% of the infections affecting the 27 million patients who undergo surgery each year. The Joint Commission has identified nosocomial infection rates as an indicator of quality care and a reliable measure of institutional quality assurance. In addition, an increasing number of health plans are now using cost-of-care data (SSI) to profile physicians for network selection. “Report cards” containing these profile results are posted on health plan Web sites with the intent to incentivize patients to seek care only from “profile-favorable” physicians. This has led the American public to believe surgical infections are potentially preventable (unless proven otherwise).

In 2006, the Institute of Medicine report “Rewarding Provider Performance: Aligning Incentives in Medicare” (September 2006) recommended pay for performance (P4P) programs as an “immediate opportunity” to align incentives for performance improvement. Shortly thereafter, legislature required the Centers for Medicare & Medicaid Services (CMS) to adopt this approach for Medicare. Despite a system-wide concern over the choice and validity of measurements used to ascertain “improvement,” more than half of commercial health maintenance organizations currently have P4P systems in place. As the

categories of providers (clinicians, hospitals, and other health care facilities), numbers of measures, and dollar amounts at risk have increased, we are to be held more accountable than ever before.

This month, CORR features scientific papers presented at the 17th annual meeting of the Musculoskeletal Infection Society of North America held in San Diego, California. The theme of the congress was “The Prevention and Treatment of Surgical Site Infections.” The first six papers in this symposium address SSI prophylaxis: patient selection, asepsis, and perioperative wound monitoring. The molecular biology evidenced by FDG-PET Scans has been found useful in the differentiation of septic and aseptic prosthetic loosening. Two large, prospective, total joint series have documented a substantial decrease in surgical site infections following protocols to decolonize patients harboring virulent Staphylococcal pathogens in their anterior nares. Nosocomial colonization of one healthcare center was itself the source for an outbreak of infections caused by multidrug-resistant organisms in military wounds. Lastly, postoperative hematoma formation and persistent wound drainage have been correlated with an increase in SSI following total joint arthroplasty.

Three papers were selected from the basic science forum on the topic of antibiotic delivery systems. McLaren et al. further clarify the release potential of hand-made, acyclic, antibiotic beads. Then chitosan, made from the shells of crustaceans, has been introduced as a antibiotic-delivery vehicle due to its film-forming properties, biocompatibility and slow biodegradation. Until recently, the inability to incorporate certain drugs into biodegradable beads has limited the arsenal available for treating multidrug-resistant, Gram positive pathogens such as methacillin resistant *Staphylococcus aureus* (MRSA) and vancomycin resistant

M. D. Wongworawat (✉)
Department of Orthopaedic Surgery, Loma Linda University
Medical Center, 11406 Loma Linda Drive, Suite 218, Loma
Linda, CA 92354, USA
e-mail: wongworawat@gmail.com

G. Cierny III
Department of Orthopaedic Oncology and Infectious Diseases,
REOrthopaedics, Inc., San Diego, CA, USA

Enterococcus (VRE); the authors of “Activity of Eluted Daptomycin from Calcium Sulfate Against Two Strains of Staphylococcus” disclose a clever method to incorporate daptomycin into calcium sulfate pellets using commercially available OsteoSet[®] kits.

The last four papers link a timely diagnosis, appropriate treatment and predictable outcomes with new information regarding the natural history of specific musculoskeletal infections: septic arthritis of the ankle and the shoulder; polymicrobial prosthetic joint infections; and thigh pyomyositis. Segues of such “evidence” to newer, specific nuances of therapy shall further serve to justify our investigations with logical conclusions. We are being held

responsible. Orthopaedic surgeons are under particular scrutiny: our operations are growing more and more complex; we are experiencing a higher incidence of patients compromised with significant comorbidities; the use of surgical implants is on the rise.

The increased focus on quality measures, including the implementation of the Surgical Care Improvement Project, will soon bring discussions on musculoskeletal infection to the forefront. With the high cost of health care, increased patient awareness, escalating medico-legal issues and insurance pressures, the medical community must advocate patient safety and make every effort to support “best practices.”