Symposium: 2016 Musculoskeletal Infection Society Proceedings

Editorial Comment: 2016 Musculoskeletal Infection Society Proceedings

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Death from infectious illnesses remains a substantial challenge for orthopaedic surgeons worldwide. While overall mortality has declined since the early 1900s, death due to antimicrobial-resistant organisms has increased since the 1980s [2]. To put this in perspective, the mortality rate for those following a periprosthetic joint

infection remains higher than that of five of the most commonly diagnosed cancers [1, 5]. Substantial hurdles remain with regards to understanding musculoskeletal infection at the molecular level, including reaching an accurate diagnosis, and implementing appropriate treatments for our patients.

No one medical discipline can undertake this burden alone. The Musculoskeletal Infection Society is based on the premise that a multidisciplinary approach for the treatment of musculoskeletal infection will provide better solutions for our patients. Our Annual Meeting brings together orthopaedic surgeons, infectious disease specialists, and basic science researchers in one forum to present cutting-edge scientific information on musculoskeletal infection. The meeting from which these proceedings were taken, which was held in August 2016 in Charlotte, NC, USA was no exception, as attendees heard potential management solutions (and developed more questions) for our most-challenging musculoskeletal infections.

As much as this is a problem at the level of our subspecialty society and more broadly across orthopaedics and its sister disciplines, the global-health impact of musculoskeletal infection

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will call for greater resource investments from governmental sources.

The obesity epidemic underscores this point as more patients at an earlier age are undergoing total joint arthroplasty, sometimes with concomitant comorbidities; these patients are at risk

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for serious prosthetic joint infections. Appropriate dosing of antibiotics is also of paramount importance in infection prophylaxis and underdosing remains a substantial problem [3]. Research suggests that our “sterile” operating room environment may, in fact be not so “sterile”, thereby predisposing to nosocomial infections [4].

Although biomarkers and implant sonication have improved our capabilities in accurately diagnosing infections, pathogen identification remains a challenge. Local delivery of antibiotics is seeing wider use, as scientists look at ways to create antimicrobial coatings for implants and identify other vehicles that can be used to deliver antimicrobial agents for infection prevention and treatment.

And while there are plenty of accomplishments, as will be evident to all who have a look at the contents of

this year’s proceedings in *CORR*[®], more work needs to be done at all levels—economic, social, clinical, and basic science. The Musculoskeletal Infection Society will continue to promote multidisciplinary dialogue, collaboration, and innovation in this field. We hope that many of you will join us for our 26th Annual Meeting that will take place in Boston, MA, USA on August 4 and 5, 2017.

References

1. Berend KR, Lombardi AV, Morris MJ, Bergeson AG, Adams JB, Sneller MA. Two-stage treatment of hip periprosthetic joint infection is associated with a high rate of infection control but high mortality. *Clin Orthop Relat Res*. 2013;471:510–518.
2. Centers for Disease Control and Prevention. Antibiotic resistance threats in the United States, 2013. Available at: <http://www.cdc.gov/drugresistance/pdf/ar-threats-2013-508.pdf>. Accessed March 17, 2017.
3. Kheir MM, Tan TL, Azboy I, Tan DD, Parvizi J. Vancomycin prophylaxis for total joint arthroplasty: Incorrectly dosed and has a higher rate of periprosthetic infection than cefazolin. *Clin Orthop Relat Res*. [Published online ahead of print April 11, 2017]. DOI: [10.1007/s11999-017-5302-0](https://doi.org/10.1007/s11999-017-5302-0).
4. Richard RD, Bowen TR. What orthopaedic operating room surfaces are contaminated with bioburden? A study using the ATP bioluminescence assay. *Clin Orthop Relat Res*. [Published online ahead of print January 3, 2017]. DOI: [10.1007/s11999-016-5221-5](https://doi.org/10.1007/s11999-016-5221-5).
5. Zmistowski B, Karam JA, Durinka JB, Casper DS, Parvizi J. Periprosthetic joint infection increases the risk of one-year mortality. *J Bone Joint Surg Am*. 2013;95:2177–2184.