

693. Comparison of the 2011 Musculoskeletal Infection Society (MSIS), the 2013 International Consensus Meeting (ICM) and the Infectious Diseases Society of America (IDSA) Diagnostic Criteria for Prosthetic Joint Infection (PJI)

Dante Melendez, MD¹; Douglas Osmon, MD²; Kerryl E. Greenwood Quaintance³; Arlen D. Hanssen, MD⁴; Robin Patel, MD, FIDSA, FRCP(C), D(ABMM), FACP, F(AAM)⁵; ¹Division of Infectious Diseases, Mayo Clinic College of Medicine, Rochester, MN; ²Division of Infectious Diseases, Mayo Clinic, Rochester, MN; ³Mayo Clinic, Rochester, MN; ⁴Orthopedics, Mayo Clinic, Rochester, MN; ⁵Divisions Of Clinical Microbiology and Infectious Diseases, Mayo Clinic, Rochester, MN

Session: 100. Approach to Clinical Infections

Friday, October 10, 2014: 12:30 PM

Background. Previously, we compared the 2011 MSIS and IDSA diagnostic criteria, finding a very high degree of agreement for case classification. In 2013, the ICM diagnostic criteria were released as a modification to the MSIS criteria, with the major change being removal of periprosthetic purulence as a minor criterion. Herein, we are presenting a comparison of the three diagnostic criteria.

Methods. The medical records of patients evaluated at Mayo Clinic Rochester for knee or hip prosthetic failure from 1997-2012 were reviewed and patients were

classified as having PJI and aseptic failure (AF) by the MSIS, ICM and IDSA diagnostic criteria.

Results. A total of 423 subjects were studied, 29 (6.9%) with hip and 394 (93.1%) with knee prostheses. Among these, 79 (18.7%), 81 (19.1%) and 81 (19.1%) were classified as PJI by MSIS, IDSA and ICM criteria, respectively. There was disagreement between MSIS and IDSA criteria in 4 cases (1 AF and 3 PJI cases by IDSA criteria, $p = 0.3$).

There was disagreement between ICM and MSIS criteria in 6 cases ($p = 0.4$), with 2 classified as PJI by MSIS and AF by ICM criteria. Both were classified as PJI by IDSA criteria and clinically managed as infections. The other 4 were classified as AF by MSIS and PJI by ICM criteria. Three of these were classified as AF and 1 as PJI by IDSA criteria, and all 4 were managed as non-infected cases; none had evidence of infection on follow up.

There was disagreement between ICM and IDSA criteria in 8 cases ($p = 1$), with 4 classified as PJI by IDSA but AF by ICM criteria. Two were classified as PJI by MSIS (and managed as infections) and 2 as AF by MSIS (one managed as an infection and the other as non-infected with no evidence of infection on follow up). Among the 4 cases classified as AF cases by IDSA criteria and PJI by ICM criteria, 3 were classified as AF by MSIS criteria (2 managed as non-infected cases, with no infection on follow up, and 1 managed as an infection), and 1 was classified PJI by MSIS criteria (and managed as infection).

Conclusion. Although no statistically significant difference was found across the three classification systems, overall there was less discordance between the IDSA and MSIS classification systems than between the ICM and the other two classification systems. The finding of periprosthetic purulence appears to be an important criterion for PJI diagnosis.

Disclosures. All authors: No reported disclosures.