Presentation Title/Topic: Is There a Need for Extended Culture Duration in Hip and Knee Periprosthetic Joint Infection?

Summary/Abstract: Introduction: Periprosthetic joint infection (PJI) is a devastating and feared complication of hip and knee arthroplasty. Operative cultures are essential for the diagnosis and treatment of PJI but the ideal culture duration remains unclear. The purpose of this study is to compare culture yield and organism profile between standard (5 day) and extended (14 day) culture in hip and knee PJI. Methods: A retrospective chart review was completed between 2006 and 2015. All patients with an acute PJI (<4 week of symptoms) meeting Musculoskeletal Infection Society (MSIS) criteria of a primary hip or knee arthroplasty were included. A standard growth cohort (5 days) was compared to an extended growth cohort (14 days) using standard statistical analysis. Results: Overall, 189 patients were included, 102 (53.97%) standard duration and 87 (46.03%) extended duration. The only differences in baseline variables were more hip PJIs included in the standard cohort (60.32% vs 49.43%, p=0.005). There was no difference between standard and extended cohorts with regard to overall culture yield defined by minimum of one positive culture (1x, p=0.466) or minimum two positive cultures (2x, p=0.725). Also, there was no difference in the rates of individual organisms identified between the two included indolent organisms such as Coagulase negative staphaolococcus (CoNS) and P. acnes (2x p = 0.738, 1x p = 0.353). Conclusion: When comparing an extended culture cohort to a standard culture cohort in acute hip and knee PJI, there was no statistical increase in the number or type of organisms identified.

The main educational objective of my presentation would be:

Discuss the role of prolonged cultures in periprosthetic hip and knee joint infections.
Name: Benjamin M. Wooster

Degree(s): MD

☐ Physician    ☑ Resident

Affiliation: Duke University Medical Center, Dept. of Orthopaedic Surgery

Address: Duke University Medical Center, Dept. of Orthopaedic Surgery, Box 3000

City/State/Zip: Durham, NC 27710

Phone: (919) 684-3170       Fax: (919) 681-7672

E-mail: benjamin.wooster@duke.edu

Please complete and return this form, along with the Conflict of Interest Disclosure form, no later than Friday, May 19 to:

North Carolina Orthopaedic Association

PO Box 27167, Raleigh, NC 27611

FAX: 919-833-2023

Or submit information electronically (preferred) to: nlowe@ncmedsoc.org