RD PJI are more likely to be culture-negative than OA PJI. Prior PJI, histopathology and better outcomes suggest biologic differences that should be explored further.

**Conclusion.** RD PJI are more likely to be culture-negative than OA PJI. Prior PJI, histopathology and better outcomes suggest biologic differences that should be explored further.

**Disclosures.** All authors: No reported disclosures.

385. Arthroscopic vs. Open Surgery for Septic Arthritis of the Knee: A Systematic Review and Meta-Analysis

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**Session:** 48. Infections of Joints

**Thursday, October 3, 2019: 12:15 PM**

**Background.** Septic arthritis is a joint-threatening and life-threatening infection, with the knee representing the most frequently involved joint. There is no definitive treatment algorithm for the management of this condition, which typically includes surgical debridement to decompress the joint, followed by organism-specific intravenous antibiotics.

**Methods.** MEDLINE (1965–2018), SCOPUS (1973–2018), The COCHRANE Library (2006–2017), EMBASE (1974–2018), reference lists, and scientific meetings were searched for relevant studies on the treatment of native knee septic arthritis by three independent reviewers. No language restrictions were used. Selection criteria included all studies reporting on native knee septic arthritis in adults treated with arthroscopy and open arthroscopy with irrigation and debridement. Data Collection and Analysis Studies were identified, subjected to inclusion and exclusion criteria, and reviewed by three independent reviewers. Patient characteristics, interventions, and outcomes were extracted, and the trials were rated for quality based on established criteria. A meta-analysis was conducted for the primary outcome, reoperation occurring after arthroscopic vs. open arthroscopy irrigation and debridement for the treatment of septic arthritis. We used a qualitative analysis for secondary outcomes physical function and hospital length of stay.

**Results.** From 624 abstracts, eight trials met inclusion criteria, one randomized controlled trial and seven retrospective cohorts. Quantitative meta-analysis showed arthroscopic irrigation and debridement resulted in fewer reoperations compared with open arthroscopy (RR = 0.76; 95% CI 0.59–0.97, P = 0.03, F = 24%). Figure 1. A qualitative summary of seven included studies assessing physical function showed arthroscopic debridement results in improved functional outcomes and range of motion compared with open arthroscopy. Based on four trials, qualitative summary demonstrated that arthroscopic debridement results in decreased hospital length of stay compared with open arthroscopy.

**Conclusion.** Arthroscopic irrigation and debridement is favored over open arthroscopy with regard to lower rates of reoperation, improved functional outcomes, and shorter hospital length of stay.

**Disclosures.** All authors: No reported disclosures.

386. Blue Light Reduces Cutibacterium (Propionibacterium) Acnes Bacterial Burden: Orthopedic Shoulder Infection Prevention Strategy?

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**Background.** Cutibacterium acnes (C. acnes) is a common shoulder periarticular joint infection (PJJ). Blue light (BL) is effectively used in the dermatologic clinical setting against acne vulgaris caused by C. acnes. Photodynamic therapy (PDT) is the use of light source and photosensitizer (PS) to enhance antimicrobial activity. We studied the effect of PDT using BL and PS in vitro on shoulder PJJ isolates of C. acnes.

**Methods.** 19 strains were grown in thioglycollate medium and diluted in sterile normal saline (NS) to a turbidity of 0.5 McFarland standard; OD₆₀₀ of 0.1 to 0.15. 250 μL with PS added were placed in 96-well plates at 37ºC, exposed to BL (415 nm) placed 1 cm above for 0 to 60 minutes at 15-minute intervals. Susceptibility to BL alone, and BL with PSs such as riboflavin (R, Vit B2), fluorescein (F) or demeclocycline (tetracycline antibiotic, “D”) were studied. After serial 10-fold dilution with NS, 3 μL of each well were spotted onto Brucella Blood Agar plates and incubated anaerobically.