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Focus on Dental Prophylaxis

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DENTAL PROPHYLAXIS AFTER TOTAL JOINT ARTHROPLASTY?

Total joint replacement is considered one of the most effective and lifestyle-changing surgical procedures. In contrast, periprosthetic joint infection (PJI) can be a costly and debilitating complication. Long have surgeons, dentists and patients worried about the risk of seeding a prosthetic joint with oral bacteria during dental procedures. Traditionally, prophylactic antibiotics have been administered just prior to these procedures with the hope of reducing infection rates. However, this practice was rooted in theory and not well-conducted studies.



HISTORY OF DENTAL PROPHYLAXIS

Numerous studies have demonstrated bacteremia immediately following gingival agitation including

invasive dental procedures, professional cleanings and even tooth brushing. Similar trials also showed a significant decrease in serum bacterial load when oral antibiotics were administered just prior to the dental procedure. Based upon this information and the substantial impact of PJI, surgeons and dentists alike began recommending for prophylactic measures.



2012 CLINICAL PRACTICE GUIDELINES (CPG)

In 2012 the American Academy of Orthopedic Surgeons (AAOS), American Dental Association (ADA) and 10 additional medical associations convened to establish a unifying set of guidelines for administering prophylactic antibiotics. After a thorough review of available literature along with strict inclusion criteria, the group agreed that there was a lack of robust evidence for or

against antibiotic prophylaxis prior to dental procedures. As such, they recommended that practitioners reconsider their stance on the routine use of prophylaxis and rely instead on clinical judgment.

2015 JOURNAL OF THE AMERICAN DENTAL ASSOCIATION (JADA) REPORT

In January of 2015 *JADA* published controversial guidelines recommending against prophylactic measures. Unlike the 2012 CPG, no other medical associations provided input. Additionally, the ADA used less-stringent criteria for excluding low-quality studies. Two studies on which the *JADA* based its report were omitted by the 2012 CPG work group due to their retrospective nature. A recent additional study cited by the *JADA* was also retrospective and would likely have been excluded from a collaborative update. Furthermore, many practitioners felt that the wording of the *JADA* guidelines offered less flexibility for clinical judgment-based exceptions.



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RECOMMENDATIONS

If the patient elects to take prophylactic antibiotics, below is a suggested algorithm:

- Patients not allergic to penicillin or cephalosporins: Cephalexin or Amoxicillin 2 grams orally, 1 hour prior to procedure (usually four 500mg tablets are dispensed)
- Patients not allergic to penicillin or cephalosporins and unable to take oral medication: Cefazolin 1 gram or Amoxicillin 2 grams IM or IV, 1 hour prior to procedure
- Patients allergic to penicillin or cephalosporins: Clindamycin 600mg orally, 1 hour prior to procedure (usually two 300mg tablets are dispensed)
- Patients allergic to penicillin or cephalosporins and unable to take oral medication: Clindamycin 600mg IM or IV, 1 hour prior to procedure

AAOS has created a shared decision-making tool which is available on-line along with a brief patient-oriented article:

<http://www.aaos.org/research/guidelines/PUDP/DentalSDMTool.pdf>



If additional questions or concerns arise, the patient, dentist or general practitioner should always feel free to contact the treating orthopedist for additional input and collaboration.

ABOUT DR. CHRISTAL

Dr. Christal is a board-certified orthopedic surgeon who is fellowship trained in Total Joint Arthroplasty. He specializes in the evaluation and treatment of patients with arthritis of the hip and knee.

Dr. Christal is the only board-certified, fellowship-trained Total Joint surgeon working out of Swedish-Edmonds Hospital.

His treatment philosophy is centered on a personal interaction with his patients and shared-decision making to achieve the objective of maximizing patient comfort and function.

Contact Dr. Christal with questions about your patients (425-673-3902 or email at a.christal@proliancesurgeons.com) or visit the following website for more information:

www.edmondsorthopedics.com