AAOS-ADA Clinical Practice Guideline

Shared Decision Making Tool: Should I Take Antibiotics Before My Dental Procedure?

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A shared decision making (SDM) tool promotes the collaborative decision making between patient and clinician for best treatment strategy. It is an additional tool to be used and supplements, but does not replace, informed consent procedures.

As a useful aid to the American Academy of Orthopaedic Surgeons-American Dental Association (AAOS-ADA) *Prevention of Orthopaedic Implant Infection in Patients Undergoing Dental Procedures* clinical practice guideline, this SDM tool would engage patients in a decision making process and provide information to further clarify the risks, benefits, and alternatives to treatment.

Introduction

You have an orthopaedic implant (for example, joint arthroplasty, metal plates or rods) from a previous orthopaedic surgery.

A potential complication of these implants is bacterial infection, which occurs in approximately 1% to 3% of patients. These infections require additional surgery as well as antibiotic usage for an extended period of time. Most infections occur around the time of the procedure (within 1 year), but some have occurred much later.

In theory, late implant infections are caused by the spread of the bacteria from the bloodstream to the implant. Unfortunately, there is no clear scientific evidence to support this theory. We know that many patients with orthopaedic implants frequently have bacteria in their blood that does not spread to their implants.

Dental procedures have long been considered a potential cause of implant infections even after the initial orthopaedic postoperative period. This is because dental procedures can introduce bacteria from the mouth into the bloodstream. However, this fact should be considered in the context that eating and performing oral hygiene at home may also introduce oral bacteria into the blood.

Traditionally, antibiotics have been provided before dental procedures in patients with orthopaedic implants to minimize the bacteria that get into the blood. Best evidence, however, does not show that antibiotics provided before oral care help prevent infections of orthopaedic implants. The routine use of antibiotics in this manner has potential side effects, such as increased bacterial resistance, allergic reactions, and diarrhea, and may even cause death.

Patients who have compromised immune systems might be at greater risk for implant infections. Diabetes, rheumatoid arthritis, cancer, chemotherapy, and chronic steroid use are examples that suggest the presence of immunosuppression. Please discuss your potential for immunosuppression with your physician or dentist. Patients who are immune-compromised might wish to consider antibiotics before dental procedures because of their greater risk for infection.

Decisions with regard to antibiotic premedication should be made by patients, dentists, and physicians in a context of open communication and informed consent. See Figure 1, the Doctor-Patient Shared Decision Making Tool.

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Figure 1

Doctor-Patient Shared Decision Making Tool

After reading the educational material in the article Introduction, the patient should **answer the following questions and complete the checklist,** then **discuss with his or her dentist/physician** whether taking antibiotics would be prudent before undergoing a dental procedure.

Questions for the Patient	Patient Checklist
After reading the article Introduction, circle the letter of the answer that you feel best answers each question.	**Please place a checkmark next to the answer that you feel best completes each statement.**
1. Patients with orthopaedic implants have which of the following: a. 0% chance of infection b. 0% to 1% chance of infection c. 1% to 3% chance of infection d. More than a 3% chance of infection	1. Based on this educational material, I have adequate understanding of implant infections associated with dental procedures: ___ YES ___ NO
2. Most infections: a. are related to dental procedures b. occur around the time of surgery c. are related to skin infections d. occur long after surgery	2. My physician/dentist has discussed my specific risk factors with me: ___ YES ___ NO
3. Some dental procedures: a. routinely cause implant infections b. are the primary source of implant infections c. never cause implant infections d. allow bacteria to enter the bloodstream	3. I need further education and discussion on this issue: ___ YES ___ NO
4. Routine use of pre–dental procedure antibiotics: a. is not supported by current evidence b. may be beneficial in certain groups of patients c. is associated with unwanted side effects d. All of the above	4. I am immunocompromised because I have: _____ 5. Based on the education material and discussion, I will: ___ Not take antibiotics before my dental procedure ___ Take antibiotics before my dental procedure

This Doctor-Patient Shared Decision Making Tool is designed to help the patient who has undergone an orthopaedic procedure determine, with the assistance of his or her dentist or physician, whether taking an antibiotic prior to a dental procedure is prudent or necessary.

History of This Shared Decision Making Tool

Evidence Based Practice Committee

On September 22, 2012, the members of the AAOS Appropriate Use Criteria Committee, the Evidence Based Practice Committee, and the Guidelines Oversight Committee unanimously approved the concept of developing a supplementary document, called a Shared Decision Making Tool, as a companion to the AAOS-ADA Evidence-Based Guideline on *Prevention of Orthopaedic Implant Infection in Patients Undergoing Dental Procedures*.

A draft of this tool was shared with all members of the committee, who had the opportunity to provide comments and feedback.

AAOS-ADA CPG Work Group

The chairs of the clinical practice guideline work group, Dr. William Watters and Dr. Michael Rethman, provided Dr. David Jevsevar, the author of this SDM tool, feedback on the draft of this SDM information sheet and questionnaire.

On October 16, 2012, the chairs sent the SDM tool to the members of the work group and requested further comments and feedback from them.

Council on Research and Quality

The SDM tool was shared with the members of the Council on Research and Quality on October 26, 2012, as information only and to obtain feedback. Because the plan has been to publish this document as a tool, or as an example that others can modify, it was decided that this SDM tool does not need official AAOS endorsement.

General Background Information Regarding Shared Decision Making

The federal *Patient Protection and Affordable Care Act*, section 3506, states that the purpose of SDM is to (1) facilitate collaborative processes between patients, caregivers or authorized representatives, and clinicians that engages the patient, caregiver, or authorized representative in decision making; (2) provide patients, caregivers, or authorized representatives with information about trade-offs, risks, and benefits among treatment options; and (3) facilitate the incorporation of patient preferences and values into the medical plan.[1]

SDM is a collaborative process that allows patients and their providers to make healthcare treatment decisions together, taking into account the best scientific evidence available as well as the patient's values and preferences. SDM honors both the provider's expert knowledge and the patient's right to be fully informed of all care options as well as the potential harms and benefits. This process provides patients with the support they need to make the best individualized care decisions while allowing providers to feel confident in the care they prescribe.[2]

A growing body of research shows that when patients are well informed and play a significant role in deciding how they are going to treat or manage their health conditions, things work out better. Informed patients feel better about the decision process. Their decisions are more likely to match up with their preferences, goals, and concerns.[3]

References

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3. Barratt A: Evidence Based Medicine and Shared Decision Making: The challenge of getting both evidence and preferences into health care. *Patient Educ Couns* 2008;73(3):407-412.