Clinical Practice Guideline

May 2025

Summary

Indication of antibiotic use in oral care

KENNIS INSTITUUT MONDZORG KIMO

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Visiting address
Orteliuslaan 750, 2nd floor
3528 BB UTRECHT

Postal address
P.O. Box 4141
3502 HC Utrecht

030 60 76 350
info@hetkimo.nl
www.hetkimo.nl

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INTRODUCTION

Who is the Directive aimed at?

This clinical practice guideline (CPR) is intended for dentists and dental specialists. Indirectly, the KPR is also important for dental hygienists, despite the fact that they do not have the power to prescribe. The content of this guideline can also contribute to a correct indication for an antibiotic in treatment by other (oral) care providers.

Target group (patients)

The Directive applies to:

- Patients undergoing implantological treatment and/or peri-implantological surgery;
- Patients undergoing endodontic treatment;
- Patients undergoing surgical removal of the wisdom teeth;
- Patients with periodontal disease;
- Patients with peri-implantitis;
- Patients with periapical granuloma/periodontitis apicalis;
- Patients with a dentogenic infection and/or abscess.

For dosage recommendations for children, the ROC refers to the Children's Formulary.

RECOMMENDATIONS

Antibiotic prophylaxis – implantology

Discuss the pros and cons of antibiotic prophylaxis with the patient in order to jointly come to a risk assessment.
Consider administering antibiotic prophylaxis for:

- Bone augmentation without implant placement (pre-implantological surgery);
- Bone augmentation in combination with implant placement (sinus floor elevation, guided bone regeneration, *immediate placement* procedures);
- Placement of implants after previous implant failure;
- A situation in which implant failure may lead to a poor new clinical baseline (of mucosa and/or bone);
- Presence of risk factors that may affect wound healing (such as diabetes mellitus);

Be cautious with antibiotic prophylaxis if:

- Placement of implants without additional risk factors and without additional bone augmentation;
- Soft tissue surgery;
- *Ridge preservation* using bone substitute only.

If antibiotic prophylaxis is prescribed, a single dose of amoxicillin is 2 grams recommended 30-60 minutes before the procedure. In case of allergy to amoxicillin, 600 mg clindamycin can be given once.

There is no indication for extended antibiotic prophylaxis.

Antibiotic prophylaxis – endodontics

Be cautious with antibiotic prophylaxis in endodontic treatments.

Antibiotic prophylaxis – third molar

For this purpose, reference is made to the relevant basic question of the KIMO Guideline Third Molar.

RECOMMENDATIONS

Therapeutic antibiotic use – periodontitis1

Routine prescription of antibiotics for the treatment of periodontal disease is not indicated.

Only as part of a more extensive treatment, including supra- and subgingival cleaning and professional oral cleaning, after discussing the advantages and disadvantages of antibiotic use with the patient and in the case of a well-motivated patient, additional treatment with an antibiotic can be considered in specific situations, such as:

- Patients with periodontal disease, generalized, advanced to advanced, rapidly progressive with a relatively plaque- and tartar-free mouth;
- Patients with a documented rapid progression of bone breakdown due to periodontal disease;
- Patients with necrotizing periodontal disease with systemic symptoms.

In connection with *antimicrobial stewardship*, a mono cure is preferable to a combi cure. Therefore, if antibiotic treatment is decided, metronidazole (7 days 3 dd 500 mg) is the first drug of choice.

In complex situations:

- Patients with good self-care and poor response to well-performed periodontal treatment;
- Young patients (<21 years) in whom periodontal degradation occurs mainly in the molars and incisives (molar/incisive pattern);

a combination of amoxicillin and metronidazole (e.g. 3 dd 500 mg + 3 dd 500 mg) for 7 days may be considered. In such a case, the choice should explicitly take into account the increased risk of resistance and side effects.

Based on the lack of scientific evidence regarding the use and interpretation of periodontal microbiological research, the guideline development committee considers it permissible to omit microbiological research. The guideline development committee considers Setting up surveillance to prevent resistance in paropathogens in a study context is essential.

Therapeutic antibiotic use – peri-implantitis

For this purpose, reference is made to the relevant basic question of the KIMO guideline peri-implant infections.

[1] Consider consulting with the treating specialist in patients with post-radiotherapy status in the head and neck region, immunocompromised patients (not further defined), patients at increased risk of Medication Related Osteonecrosis of the Jaw (MRONJ), patients for whom endocarditis prophylaxis is indicated.

RECOMMENDATIONS

Therapeutic antibiotic use – periapical granuloma/periodontitis apicalis[1]

Routine prescription of an antibiotic for the treatment of periapical granuloma/periodontitis apicalis is not indicated.

Therapeutic antibiotic use – dentogenic infections and/or abscess1

Routine prescription of an antibiotic for the treatment of dentogenic infections and/or an abscess is not indicated.

Consider additional treatment with an antibiotic if there is an expanding infiltrate or alarm symptoms (such as fever, difficulty swallowing, trismus, and general malaise). Consult with or refer to the oral and oral surgeon if in doubt.

If it is decided to treat with an antibiotic, amoxicillin (5 days 3dd 500 mg, with good clinical response) is the first drug of choice. In case of allergy to amoxicillin, clindamycin (5 days 3dd 600 mg) is the alternative.

[1] Consider consulting with the treating specialist in patients with post-radiotherapy status in the head and neck region, immunocompromised patients (not further defined), patients at increased risk of Medication Related Osteonecrosis of the Jaw (MRONJ), patients for whom endocarditis prophylaxis is indicated.

RECOMMENDATIONS

Prevention of MRONJ

A careful history of medication use is essential. This also applies to the use of bone-inhibiting medication (for the treatment of osteoporosis and certain forms of cancer) and angiogenesis inhibitors (for the treatment of certain forms of cancer) now and in the past (also include previous use of this medication in the ASA list). If in doubt about previous use, contact the prescribers of the medication in question or the pharmacist.

The following policy applies to patients in the general or dental specialist oral care practice who have to undergo an (invasive) procedure and who have an increased risk of medication-related osteonecrosis of the jaw due to the use of bone breakdown medication or angiogenesis inhibitors now or in the past:

- In endodontic or periodontal treatment without bone manipulation, antibiotic prophylaxis is not indicated;
- In (emergency) extraction, implantological and/or periodontal treatment with bone manipulation and apex resection:
  - In patients who have been receiving oral or shorter than 24 months or less than 1 year of taking or having used intravenous bone breakdown medication, antibiotic prophylaxis is not indicated;
  - Antibiotic prophylaxis is indicated in patients who are now or have been taking oral bone breakdown medication for 24-36 months;
  - In patients who now or in the past:
    - At least 36 months of oral bone breakdown inhibitory medication, OR;
    - At least 1 year of intravenous bone breakdown inhibition medication, OR;
    - Angiogenesis inhibitors;

      use or have used, extreme restraint must be observed with regard to performing the procedure. If the procedure is unavoidable, the procedure is preferably performed in secondary care and antibiotic prophylaxis is indicated.

If antibiotic prophylaxis is prescribed, amoxicillin is the drug of choice. There is no consensus on the dosage. Clindamycin can be given in case of allergy to amoxicillin.

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