Antimicrobial prophylaxis against bacteraemia in adult renal transplant recipients undergoing dental procedures

General principles

1. Currently, there are no evidence-based guidelines for prophylactic antibiotic therapy for kidney transplant recipients. A survey of nephrologists in the USA showed that most centres use American Heart Association endocarditis prevention regimen [1-4].

2. The UK National Institute for Health and Clinical Excellence (NICE) clinical guideline does not recommend antibiotic prophylaxis against IE for any patient, regardless of their cardiac risk status, when undergoing dental procedures or interventional procedures of the gastrointestinal, genitourinary or respiratory tracts [5].

3. The following Australian guidelines are issued by Therapeutic Guidelines Limited and are applicable *only for patients with a cardiac condition associated with the highest risk of adverse outcomes from endocarditis* [6]:

    a. Prophylaxis is always required for procedures with a high incidence of bacteraemia (ie bacteraemia occurs in 70% or more of patients having the procedure).

    b. Dental procedures with a moderate incidence of bacteraemia (ie bacteraemia occurs in 30% or more of patients having the procedure) should be considered for prophylaxis depending on the circumstances of the procedure and the periodontal condition.

    c. Prophylaxis is not recommended for procedures with a low incidence of bacteraemia.

4. The KHA-CARI adaptation of the KDIGO Clinical Practice Guideline for the Care of Kidney Transplant Recipients does not cover the topic of antibiotic prophylaxis for kidney transplant recipients [7]. ***The decision to prescribe antibiotic prophylaxis for dental or other procedures needs to be considered on a case-by-case basis.***

The following is a summary of the Australian Therapeutic Guidelines Limited recommendations [6]:

Prophylaxis always required

1. extraction

2. periodontal procedures including surgery, subgingival scaling and root planing

3. replanting avulsed teeth

4. other surgical procedures (eg apicoectomy)

Prophylaxis required in some circumstances

Consider prophylaxis for the following procedures if multiple procedures are being conducted, the procedure is prolonged or periodontal disease is present:

1. full periodontal probing for patients with periodontitis
2. intraligamentary and intraosseous local anaesthetic injection
3. supragingival calculus removal/cleaning
4. rubber dam placement with clamps (where there is a risk of damaging gingiva)
5. restorative matrix band/strip placement
6. endodontics beyond the apical foramen
7. placement of orthodontic bands
8. placement of interdental wedges
9. subgingival placement of retraction cords, antibiotic fibres or antibiotic strips

Prophylaxis not required

1. oral examination
2. infiltration and block local anaesthetic injection
3. restorative dentistry
4. supragingival rubber dam clamping and placement of rubber dam
5. intracanal endodontic procedures
6. removal of sutures
7. impressions and construction of dentures
8. orthodontic bracket placement and adjustment of fixed appliances
9. application of gels
10. intraoral radiographs
11. supragingival plaque removal

REGIMENS FOR A DENTAL PROCEDURE

Standard prophylaxis

Amoxycillin 2 g orally, 1 hour before the procedure *or*

Ampicillin 2 g IV, within the 60 minutes (ideally 15 to 30 minutes) before the procedure

For patients hypersensitive to penicillins (excluding immediate hypersensitivity)

Cephalexin 2 g orally, 1 hour before the procedure *or*

Cephazolin 2 g IV, within the 60 minutes (ideally 15 to 30 minutes) before the procedure

For patients with immediate hypersensitivity to penicillins

Clindamycin 600 mg orally, 1 hour before the procedure *or*

Clindamycin 600 mg IV over at least 20 minutes, within the 60 minutes (ideally 15 to 30 minutes) before the procedure

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