

Protocol for Bacterial Endocarditis (BE) Prophylaxis for Liver Transplant Recipients

Indications: endocarditis prophylaxis in post transplant patient has the indicated history (as listed in protocol).

Procedure: Transplant coordinator will instruct patients who are at risk of endocarditis of the need to have pre-dental procedure antibiotics. These will be ordered by the dentist or coordinator. Drug allergies will be noted. A transplant provider will be notified. The transplant coordinator will document notification and plan in OCW.

Routine and elective dental procedures should be performed prior to transplantation whenever feasible.

Following transplant, routine and elective dental procedures should be postponed, if possible, until 6 months post-transplant and/or 6 months post treatment for rejection (if bolus intravenous steroids or thymoglobulin have been given).

Antibiotic prophylaxis with dental procedures is recommended only for patients with cardiac conditions associated with the highest risk of adverse outcomes from endocarditis, including

- Prosthetic cardiac valve
- Previous endocarditis
- Congenital heart disease only in the following categories:
 - Unrepaired cyanotic congenital heart disease, including those with palliative shunts and conduits
 - Completely repaired congenital heart disease with prosthetic material or device, whether placed by surgery or catheter intervention, during the first six months after the procedure
 - Repaired congenital heart disease with residual defects at the site or adjacent to the site of a prosthetic patch or prosthetic device (which inhibit endothelialization)
- Cardiac transplantation recipients with cardiac valvular disease

Dental procedures for which prophylaxis is recommended in patients with cardiac conditions listed above:

All dental procedures that involve manipulation of gingival tissue or the periapical region of teeth, or perforation of the oral mucosa*

***Antibiotic endocarditis prophylaxis is NOT recommended for the following dental procedures or events:** routine anesthetic injections through noninfected tissue; taking dental radiographs; placement of removable prosthodontic or orthodontic appliances; adjustment of orthodontic appliances; placement of orthodontic brackets; and shedding of deciduous teeth and bleeding from trauma to the lips or oral mucosa.

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Gastrointestinal/Genitourinary Procedures:

Antibiotic prophylaxis solely to prevent bacterial endocarditis (BE) is no longer recommended for patients who undergo a GI or GU tract procedure, including patients with the highest risk of adverse outcomes due to BE. Antibiotic prophylaxis to prevent cholangitis is given prior to ERCP procedures.

- May treat enterococcal UTI prior to GU manipulation if high risk cardiac conditions present (see above)
- May administer anti-enterococcal antibiotic if procedure is not elective

Other procedures: BE prophylaxis for procedures of the respiratory tract or infected skin, subcutaneous tissue or musculoskeletal tissue is recommended ONLY for patients with the high-risk cardiac conditions shown above.

Prevention of Prosthetic Joint Infection: Routine prophylaxis to prevent hematogenous seeding of prosthetic joints is not recommended for procedures in the general population. HOWEVER, liver transplant patients with immune suppression may be at higher risk for bacteremia, and may be considered for prophylactic antibiotics prior to dental procedures, especially for high-risk procedures (see above) and especially within the first two years of prosthetic joint implantation. (Refer to Advisory Statement by the American dental Association and the American Academy of Orthopedic Surgeons, *JADA*, Volume 134, and July 2003)

Dental Hygiene

Maintaining optimal oral and dental hygiene is perhaps the most effective preventative strategy against development of bacterial endocarditis, and should be emphasized in all patients. On the other hand, antibiotic prophylaxis is not 100% efficacious, and indeed may prevent only a small number of BE.

Procedure

Transplant coordinator will review patient history and recommend antibiotic prophylaxis according to protocol. All pre-transplant patients will be educated on the importance of completing elective dental procedures prior to transplant. Post-transplant instructions will include waiting 6 months post-op for any elective dental procedures. Instructions will be documented in OCW by the transplant coordinator.

Antibiotic Prophylactic Regimens Recommended for Dental Procedures

Situation	Agent	Regimen – Single dose 30–60 minutes before procedure	
		Adults	Children
Oral	Amoxicillin	2 gm	50 mg/kg

Unable to take oral medication	Ampicillin	2 g IM or IV*	50 mg/kg IM or IV
	OR		
	Cefazolin or ceftriaxone	1 g IM or IV	50 mg/kg IM or IV
Allergic to penicillins or ampicillin – Oral regimen	Cephalexin**†	2 g	50 mg/kg
	OR		
	Clindamycin	600 mg	20 mg/kg
	OR		
	Azithromycin or Clarithromycin	500 mg	15 mg/kg
Allergic to penicillins or ampicillin and unable to take oral medication	Cefazolin or ceftriaxone†	1 g IM or IV	50 mg/kg IM or IV
	OR		
	Clindamycin	600 mg IM or IV	20 mg/kg IM or IV

*IM – intramuscular; IV – intravenous

**Or other first or second generation oral cephalosporin in equivalent adult or pediatric dosage.

† Cephalosporins should not be used in an individual with a history of anaphylaxis, angioedema or urticaria with penicillins or ampicillin.

Adapted from *Prevention of Infective Endocarditis: Guidelines From the American Heart Association*, by the Committee on Rheumatic Fever, Endocarditis, and Kawasaki Disease. *Circulation*, e-published April 19, 2007.

Please refer to these recommendations for more complete information as to which patients and which procedures need prophylaxis.

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Compliance, Policy & Regulatory Committee Approval

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Date

Please see original document on transplant website.

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Date