

Hematologic Malignancies/Stem Cell Transplantation Program
Clinical Section
UCLA Health System
Los Angeles, CA 90095

CS 6.2 DIAGNOSIS AND MANAGEMENT OF INTERSTITIAL PNEUMONIA

Location: Clinical Section
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Supersedes/Replaces: B3.421g
Effective Date: April 2010

Purpose and Background

Allogeneic bone marrow transplant patients are at risk for interstitial pneumonia caused by cytomegalovirus (CMV), other viruses, Pneumocystis carinii, and toxicity of chemotherapy or radiation. Because interstitial pneumonia is associated with a high mortality, it is critical to prevent or treat this complication.

Objectives

To establish uniform guidelines for prevention, diagnosis, and treatment of interstitial pneumonia.

Procedure

A. PROPHYLAXIS

1. Pneumocystis carinii:

A. All allogeneic bone marrow transplant patients will receive Pneumocystis prophylaxis. Patients should receive trimethoprim-sulfamethoxazole starting at time of hospital admission and continuing until day-1 pretransplant. Adult patients will receive 160 mg trimethoprim/800 mg sulfamethoxazole (2 amps I.V., or 1 double strength tablet p.o.) .t.i.d. Pediatric patients will be dosed at 6 mg/kg of the trimethoprim b.i.d.

After transplant, the trimethoprim-sulfamethoxazole will be re-started when the ANC is $\geq 1000/\text{mm}^3$ (1 double strength tab p.o.tid on Saturday and Sunday only for adults), (6 mg/kg of trimethoprim for Pediatric patients on Saturday and Sunday only; not to exceed 2 DS tabs b.i.d.) and continued after transplant until the patient has been off immunosuppression (Tacrolimus or Cyclosporine in cord blood transplants & prednisone) for 2 weeks.

In patients with chronic GVHD, the trimethoprim-sulfamethoxazole prophylaxis will be continued after transplant until immunosuppression is stopped.

B. Patients with an allergy or intolerance to sulfa will receive either: Dapsone 100 mg po daily; Atovaquone (Mepron) 1500 mg suspension once daily;

pentamidine (aerosolized 300 mg, or 4 mg/kg IV, monthly) for prevention of Pneumocystis carinii pneumonia.

2. Cytomegalovirus (See SOP B6.421d. “Diagnosis and Management of Cytomegalovirus (CMV) Infection and Disease”).

B. DIAGNOSIS AND TREATMENT OF ACTIVE INTERSTITIAL PNEUMONIA

1. If a patient develops interstitial pneumonia after transplant, a diagnostic bronchoscopy with bronchoalveolar lavage will be done when clinically indicated. A transbronchial lung biopsy may also be done. If the bronchoscopy with bronchoalveolar lavage is non-diagnostic, an open-lung biopsy will be considered in select patients.
2. For treatment of Pneumocystis carinii pneumonia, trimethoprim-sulfamethoxazole will be used. Patients with an allergy to sulfa will receive intravenous pentamidine.
3. For treatment of CMV pneumonia, a combination of ganciclovir plus intravenous immunoglobulin will be used. For suspected ganciclovir-resistant CMV disease or patients unable to tolerate ganciclovir due to myelosuppression, foscarnet can be used. (See also SOP B6.421d. “Diagnosis and Management of Cytomegalovirus (CMV) Infection and Disease”).
4. From time to time, patients may be enrolled in experimental studies. In these cases, the study protocol takes precedence over the SOP guidelines.

References:

- 1) Winston, DJ: Prophylaxis And Treatment Of Infection In The Bone Marrow Transplant Recipient. Current Clinical Topics in Infectious Diseases, Vol. 13 (Remington JS, Swartz MN, eds.). Blackwell Scientific Publications, Inc., Boston 1993. p. 293-321.
- 2) Winston, DJ: Infections in bone marrow transplant recipients. Principles and Practice of Infectious Disease, Fourth Edition, (Mandell GL, Besett JE, Nolin R, eds). Churchill Livingstone, Inc, New York 1995. p.2717-2722.
- 3) Winston DJ, et al. Ganciclovir prophylaxis of cytomegalovirus infection and disease in allogeneic bone marrow transplants: results of a placebo-controlled, double-blind trial. Ann Intern Med 1993; 118:179-184.

ATTACHMENTS:

Attachment A: Procedure History

Attachment B: New/Revised Procedure Checklist

APPROVAL:

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4/15/2010

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PROCEDURE HISTORY

Date	Initials	Page	Item and Summary of Changes
7/28/09			SOP Title Change
7/28/09			Format Changed
7/28/09			References updated
7/28/09			SOP Revised
4/15/10			Tacrolimus added

Attachment A

NEW/REVISED PROCEDURE CHECKLIST

1. Information Systems changes required:
 NA _____

2. Procedure added to Training and Competency Evaluation Tool(s)? Yes
 NA

3. Procedure added/replaced in:
 Master Copy Manual Operational Copy Manual(s) HSC Transplant Online NA
Other location(s): _____

4. Obsolete SOP(s) removed from service and filed? Yes NA

5. Table of Contents, SOP and Forms Master List modified? Yes NA

6. Information will be distributed to (check all that apply):
 Electronic mail
 Staff in-service/training/rounds
 Transplant physicians
 Other sections/departments (if applicable) specify:

 Other:

Signature: _____
Manager/Director Date

Attachment B