

Infections during treatment

Sources of infection

- Patient's GI tract,
- Skin
 - including surgical wound infection
- Catheters
- Superinfection of tumor
- Environment
 - Surfaces
 - Family members
 - Other patients
 - Water
 - Food
 - Vectors
 - Mosquito
 - Flies
 - Roaches
 - Nosocomial infections
 - Hospital personnel
 - Equipment contamination
 - Blood products

Documented Infection

- Meticulous and repeated physical examination
 - Cellulitis – turn patient over!!
 - Skin Eruptions
 - HSV
 - VZV
 - Otitis media
 - Mucositis
 - Peri-anal exam
 - Catheter insertion sites
 - Remove bandages!!!
- Documented clinical diagnosis
 - Gastroenteritis
 - Urinary Tract Infection
 - Upper Respiratory Tract Infection
 - Pneumonia

Investigations

- Microbiological
 - Cultures (bacterial, viral, fungal, parasite)
 - Blood, CSF, stool, sputum, urine, bone marrow, wound, body fluids, skin swabs
- Radiographical
 - Chest X-ray
 - Ultrasound
 - CT scan
 - Echocardiogram
 - MRI (if available & necessary)
- Other
 - HIV DNA PCR, ELISA or double rapid test positive
 - Hepatitis Panel
 - Serologies

Pre-disposing risks

- Immunosuppression
 - Hematological malignancies at higher risk
 - Neutropenia
 - Prolonged
 - Severe
 - Immunodeficiency syndromes
 - Chemotherapy
 - High-dose chemotherapy
 - Medications with known mucositis risk
- Co-Morbidities
 - Endemic infections
 - Geographical predisposition
 - Malnutrition
- Invasive procedures
- Outbreaks

- Environment
 - Construction
 - Overcrowding

Micro-organisms

- Bacterial Infections
- Fungal Infections
 - Appropriate antifungal treatment: prefer to use fungicidal medications with fungistatic drugs
 - Amphotericin B + or- fluconazole (fungistatic drug)
- Viral Infections
 - Prophylaxis in the setting of exposure to Varicella
 - VZIG for patients known to have a recent varicella-zoster exposure where available
 - Where VZIG not available, use acyclovir
 - Treatment with anti-virals
 - Acyclovir = IV V's PO
 - Ganciclovir
 - Duration of treatment
 - HSV/VZV – 7 to 10 days or until all lesions are crusted
 - CMV infection – 21 days
- Malaria

List of other infections

- Co-morbidities (see relevant section)
 - HIV/AIDS
 - Tuberculosis
 - Parasitic infections (deworming/metronidazole ppx)
 - *Pneumocystis jirovecii* (a.k.a PCP)
 - Cryptosporidium
 - Oral infections

- Role of prophylaxis
 - Prophylaxis with daily co-trimoxazole provides protection against :
 - PCP
 - cryptosporidium
 - malaria
 - other opportunistic infections of the GI tract

 - Dental care prior to start and during therapy

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- Treatment
 - Tuberculosis & HIV/AIDS

 - Pneumocystis Pneumonia
 - TMP/SMX 20 mg/kg/dose every 6-8 hours IV for 21 days
 - Pentamidine 4 mg/kg IV once daily for 21 days

 - Cryptosporidium
 - Nitazoxanide
 - » however prevention of infection is most effective