Management of Infectious Complications in the CLL Population

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Disclosure of Potential Conflict of Interest

- **FINANCIAL DISCLOSURE:** None
- **Other:** Employee of CancerCare Manitoba
Objectives

- Review common infections in the CLL population
- Identify ‘at risk’ patients
- Review *CCMB CLL Clinical Practice Guidelines* for the treatment and prevention of infections
- Review special considerations when transfusing blood products
Common Bacterial Infections

- Most infections are mucosal in origin affecting:
  - Respiratory tract
  - Skin
  - Urine

- Common organisms include:
  - S. aureus  E. coli  Klebsiella pneumoniae
  - S. pneumoniae  H. influenzae  Pseudomonas aeruginosa
Common Viral Infections

- Herpes simplex
  - More common in untreated patients
- Herpes zoster
  - 29% incidence
- Cytomegalovirus (CMV)
  - Reactivation 10-25%
  - 50% asymptomatic
Opportunistic Infections

- Seldom occur in untreated patients
- The use of corticosteroids increases the risk
- Common organisms include:
  - Listeria
  - Nocardia
  - Candida
  - Aspergillus
  - Pneumocystis jirovecii
  - Histoplasmosis
  - Cryptococcus
  - Atypical mycobacterium
At-Risk Populations

- The likelihood of infections increases with:
  - the duration of treatment
  - the number of previous treatments
  - disease that is not responding to treatment
  - use of corticosteroids
  - patients treated with Fludarabine and Alemtuzumab
Treatment of Infections

• If febrile and on chemotherapy --> HOLD chemotherapy and treat infection

• Resume chemotherapy cautiously and ensure prophylaxis is prescribed
Preventative Measures

1. Antimicrobial Prophylaxis
2. Immunoglobulin Replacement
3. Vaccines
Chemotherapy Prophylaxis

**Recommendations:**
Treatment with Fludarabine/Alemtuzumab, history of shingles or cold sores, the elderly, previous infections:

- **Antibacterial:** Cotrimoxazole 960 mg (1 tab) po BID on Saturdays and Sundays OR Dapsone 100mg po 3x/week
- **Antiviral:** Valcylovir 500mg po od
- **Antifungal:** only if previous fungal infections

Duration of treatment and 6 months post
CMV Monitoring and Treatment

- Check CMV status at baseline and weekly while on ALEMTUZUMAB treatment
- >500 copies/mL = threshold for treatment
- 2 consecutive weeks positive (or rising) in asx patients OR 1 positive result + fever/sx ---> initiate treatment
- Valgancyclovir 900mg po BID until decreasing or low level positive then reduce dosing until 2 consecutive negative results
- *As long as afebrile/asymptomatic...Continue Treatment!
Hypogammaglobulinemia

- Present in up to 86% of patients with CLL
- Despite low levels most patients are asymptomatic
- Treatment can decrease incidence of bacterial infections by 50% but does not prolong survival
- Normal values: 6.9-16.2 g/L
Hypogammaglobulinemia

Recommendations:

- IgG ≤3g/L and recurrent infections requiring antibiotics
  - IVIG 400mg/kg Q 3 weeks
  - Low dose 10 grams Q 3 weeks may be as effective

*No evidence that treatment is cost-effective*
Vaccines

CLL patients respond poorly to immunizations and the overall benefit is questionable.

Recommendations:

- Seasonal influenzae vaccine: Annually
- Pneumovax: At Diagnosis
- Shingles vaccine: Not Recommended

Encourage family members to get vaccinated!
Transfusion Considerations

- To prevent Graft Versus Host (GVH) Complications

- Recommendation:
  - Anti-CMV and Irradiated Blood Products for Life
    - Fludarabine
    - Alemtuzumab
    - BMT eligible
References

