5th National
Celebrating a Second Chance at Life
Survivorship Symposium

Your Mouth and Chronic GVHD

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Learning Objectives

- Describe how chronic GVHD affects mouth, gums & teeth
- Describe therapies to treat oral GVHD & dental complications
- Discuss steps survivors should take to ensure proper monitoring of care for oral cGVHD
- Discuss how to find & work with a local dentist familiar with or willing to manage a patient with oral cGVHD
- Describe resources available to help patients understand & cope with oral cGVHD
Impact of Oral Complications

- Occur throughout course of therapy
- Can result in systemic complications
- Wide range of diseases & conditions
- Contribute to poor quality of life
  - Pain
  - Taste
  - Functional limitations
  - Appearance
- Cost of care
### Oral Complications of Chemotherapy and Hematopoietic Stem Cell Transplant

#### Acute Toxicities
- Mucositis
- Infections
  - Viral
  - Fungal
  - Bacterial
- Oral bleeding
- Taste
- Saliva change, dry mouth

#### Chronic Toxicities
- GVHD
- Saliva change, dry mouth
- Oral infections
- Taste
- Secondary cancers
- Drug reactions
- Dental growth & development
  - Teeth, Skeletal
Impact of Chronic Oral GVHD

- Pain/sensitivity
- Saliva function
  - quantity, quality, constituents
- Loss of barrier function
  - mucositis, salivary gland dysfunction (mucin)
- Taste change
- Loss of tissue elasticity/fibrosis
  - ↓ lip elasticity, ↓ jaw opening, ↓ tongue mobility
- Bacterial, fungal and viral infection
- Quality of Life and cost of care
Chronic Oral GVHD

- Mimics oral autoimmune diseases
- Inflammation/red changes:
  - velvety red / lupus-like appearance
  - patchy or generalized
- Ulcerations / Erosions
- White Changes
  - lacey and/or patchy pattern
- Thinned/translucent mucosa
  - loss of textured surface of tongue; thinned gums
- Swelling
- Taste change
- Reduced saliva
Chronic GVHD (cGVHD)

- Occurs in 30-70% allogeneic transplants
- Debilitating in 15-20% of cases
- Common sites: skin, mouth, eyes, GI, liver
- Onset >3 months (6-18 months post transplant)
- Risk factors:
  - ↑Age, F > M
  - Mismatch transplant
  - aGVHD
  - Peripheral blood > marrow > cord blood
  - Donor lymphocyte infusion
Gum Disease and GVHD

- Effect of gingival / periodontal infections
  - chronic immune challenge

- Aggressive gum therapy
  - Plaque removal
  - Antibiotics: systemic / topical / subgingival
  - Extraction of significantly involved teeth

Stimulation of Immune System

Local Recruitment of Lymphocytes

Worsens GVHD
Management of Oral Mucosal cGVHD

- **Topicals:**
  - Rinses, creams, gels, ointments
  - Steroids
  - Immunosuppressive/anti-inflammatory

- **Systemic therapy:**
  - Steroids
  - Immunosuppressives / anti-inflammatory
    - Cyclosporine
    - Tacrolimus, sirolimus
    - Azathioprine
    - Mycophenolate mofetil
    - Thalidomide
    - Etanercept, plaquenil

- **Other:** Psoralen-UVA / Photophoresis
Saliva

- **Volume, viscosity, constituents**
- **Etiology (source of problem)**
  - Cancer therapy, medications, mouth breathing, oxygen
  - GVHD
  - 1-2 months post TX to permanent
- **Management**
  - High liquid intake
  - Taste/chewing stimulants
  - Salvia stimulants:
    - Pilocarpine, cevimeline, bethanechol
  - Dental cavity prevention
  - Artificial saliva/mucosa lubricants
Taste Change

- Caused by:
  - Toxicity of cancer therapy
  - Food aversion, nausea
  - Dry mouth
    - GVHD

- Recovery:
  - Variable - gradual over 2-12+ months

- Management
  - Increase saliva
  - Improve oral hygiene
  - Increase seasoning & umami foods
  - Increase “eye appeal”
  - Zinc supplements (220 mg 2–3/day)
  - Other medicines
Prevention of Dental Damage & Cavities

- Avoid high sugar content foods & medications
- Oral hygiene
- Diet
- Fluoride/methods of application
- Mineralization of teeth
- Bacterial infection/chlorhexidine
- Salivary gland function
- Stabilization of cavities, dental materials
Oral Infections

- Infections: Bacterial, Fungal, Viral
- Unusual presentation & course
  - Non-classical clinical appearance
  - Locally invasive
  - Regional / Systemic spread
- Stimulate GVHD
- Difficult to treat
- Prevention
- Importance of periodontal health
Bacterial Infection

- Local lesions/ tenderness
- Systemic Infections: fever, bacteremia
- Normal flora / Opportunistic Pathogens
- Unusual pathogens
  - Periodontal Disease Organisms
  - Endodontic Disease Organisms
  - Mucosal Infections
Secondary Cancers After Transplant

Types:
- Oral cancer
- Lymphoproliferative disorders
- Hematologic Disorders
- Solid Tumors
- Kaposi sarcoma

Risk Factors:
- Previous treatments
- Total body irradiation
- GVHD & therapy
- Viruses (EBV, HPV)
Steps to ensure proper care of oral cGVHD

- Oral GVHD is uncommon & medically complex
- Most community providers have no or limited knowledge/experience
- Know your dentist’s training & experience
- Dentist will need to know:
  - past medical history
  - current medical status including medical laboratory information
  - medications including immunosuppression
  - status post HSCT
- Discuss mouth & dental issues of concern
- Careful follow-up, possibly more frequent dental visits for dental needs
Steps to ensure proper care of oral cGVHD (cont’d)

- Ask transplant center to recommend provider and specify necessary treatment
- Consider oral evaluation & treatment planning by experienced/integrated provider to guide community providers
- Many dental providers are unfamiliar with mucosal & salivary disease & not experienced in oncology care
- Special/persisting/unusual conditions may require referral
- Oral care must be integrated with medical management in HSCT
Resources for Oral Care

- Multidisciplinary team
- Community dentists can obtain information from cancer center
- Referral for unique/unusual findings
- Unique services may be needed: imaging, saliva study, microbial study, imaging
- Unique therapy at some transplant centers
Resources:

NCI-PDQ supportive care:


MASCC-ISOO web site and guidelines


• [www.mascc.org/oral-care](http://www.mascc.org/oral-care)

Oral care plays an important role in providing supportive care for HSCT patients

Patient Management:
- Oral diseases / Oral & systemic toxicities
- Chronic complications of treatment
- Before, During, and After chemotherapy / HCT

Oral health can affect quality of life and systemic health
Oral care must be integrated with medical management in HSCT