Managing Mucositis in the BMT Patient

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Mucositis is a big deal!
Patients report it is the worst part of the transplant experience
Painful and disruptive to normal activities
Increases risk of infection via translocation/aspiration pneumonia
How we talk about it affects patients’ perceptions

What is mucositis?
Breakdown of mucous membranes throughout digestive tract
Appears 2-10 days post chemo
• Begins with dry mouth/taste changes
A positive feedback cycle of cell damage
Pseudomembrane formation traps bacteria

What is mucositis?

<table>
<thead>
<tr>
<th>Grade</th>
<th>Symptoms</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Asymptomatic or mild symptoms, intervention not indicated</td>
</tr>
<tr>
<td>2</td>
<td>Bilateral pain in mouth with oral hygiene assistance</td>
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<tr>
<td>3</td>
<td>Severe pain, interference with oral intake</td>
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<tr>
<td>4</td>
<td>Life-threatening complications, urgent intervention indicated</td>
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<tr>
<td>5</td>
<td>Death</td>
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Who gets mucositis?

Known side effect of many chemo drugs
• Thought to be underreported in general oncology patients
• 60-85% of BMT patients will develop mucositis

Severity of mucositis correlated strongly with intensity of conditioning
Methotrexate for GVHD prophylaxis can worsen mucositis
Poor dentition, HSV, cigarette use, prior cancer treatment, comorbid conditions can all be disadvantages
How can we prevent mucositis?

No current regimens for complete prevention

**Palifermin** is the only FDA approved drug for mucositis prevention
- Currently only used for pre-auto regimens that include TBI
- Ineffective in pre-allo regimens

**Cryotherapy** recommended for high-dose melphalan
- Get clever with the ice flavors

How do we treat mucositis?

**Consistent, thorough oral care**
- Brushing teeth at least twice a day
- Flossing only if habit already established/no excessive bleeding
- Frequent NS rinses (1 L/day), can be non-sterile
- Striking a balance between clearing debris and preventing bleeding

**Pain control**
- Oral medications can be prescribed outpatient
- May need hospital admission for IV medications/PCA
- PCA can provide more consistent pain control

**Treating “pain spikes”**
- Pain often much worse with swallowing
- Premedication for PO intake
- PCA basal rate (especially at night)

**PCA use has risks!**
- Requires monitoring for oversedation/airway compromise
- Switching drugs can minimize adverse side effects (e.g. morphine to fentanyl)
- Opioid side effects can worsen existing symptoms
- Patients usually self-taper as mucositis improves, but not always

**Maintaining adequate nutrition**
- Can’t heal or get stronger without energy!
- Mucositis also causes GI symptoms (nausea, abdominal pain, diarrhea) and inhibits absorption
- TPN has both significant benefits and risks
- Tube feeds are common in pediatric BMT but rare for adults
- Consult your dietitians

**Airway protection**
- Pseudomembranes, bleeding, scabbing, lack of saliva production, and oral edema can all lead to airway compromise
- In the most severe cases, IV methylprednisolone and/or intubation required
- Set up suction at the bedside for all BMT patients
- Teach patients with copious secretions to self-suction
- Can do oral rinses in bed and use suction to spit out
### How do we treat mucositis?

**Anxiety management**
- Patients enjoy eating, talking, and being pain free
- Fear of choking/suffocation with grade 3+ mucositis
- Mucositis tends to slowly worsen and slowly improve
- Get patients out of bed/walking as much as possible

### When will it get better?

- New WBCs interrupt the positive feedback cycle
- Improvement strongly correlated with count recovery
- Mucosa extra-susceptible to injury up to 1 year after transplant
- Taste changes/low appetite can be challenging post-transplant