DENTAL CONSIDERATIONS
WITH HEAD & NECK CANCER CARE

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Patient Education Symposium
FINANCIAL/SPECIAL INTERESTS DISCLOSURES

None
AGENDA

• Why are we talking about my mouth?
• Oral side effects of cancer care
• Dental treatment recommendations
WHY ARE WE TALKING ABOUT MY MOUTH?

WHAT DOES DENTAL HAVE TO DO WITH IT

- Feel Better
- Save Teeth and Bones
- Fight Cancer
• More than 90% of adults have had a cavity
• One quarter of adults aged 20-64 have untreated caries
• 47.2% of adults aged 30 years and older have some form of gum disease
• Head and neck cancer therapy increases the chances of acquiring cavities and gum disease. It also limits what dental treatment can be rendered without potential significant side effects.
YOUR TEETH
NORMAL, HEALTHY GUMS
Healthy gums, periodontal ligament and bone anchor teeth firmly in place.

GINGIVITIS
The bacteria in plaque irritate the gums, making them red, tender swollen and likely to bleed. If plaque is not removed, it can harden into calculus (tartar).

PERIODONTITIS
In time, as plaque and calculus build up along the gum line, bacteria in the plaque begin to break down the connection between the supporting soft tissues and the tooth. As the disease progresses, bacteria begin to attack the bone tissue as well.

ADVANCED PERIODONTITIS
The gums can pull away from the teeth as more bone and the periodontal ligament are destroyed. Teeth may become loose and need to be extracted.
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<td>Swallowing Difficulty</td>
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<td>Effect on Bone</td>
<td>Osteoradionecrosis</td>
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Saliva is protective of the teeth and helps reduce bacterial biofilm from forming

Dry mouth affects approximately 80% of patients receiving radiation therapy to head and neck

Image courtesy of American Cancer Society
1. Increase oral moistening
2. Avoid alcohol and phenol containing products
3. Systemic medications can be considered
Caries is a gradual decay or breakdown of tooth hard tissues by bacteria that lead to permanent cavities in the teeth.
CARIES OR “CAVITIES”

1. Professional dental exams and cleanings every 3 months, until mutually agreed upon with your dentist
2. Complete recommended dental treatment
3. Brush at least twice daily with soft toothbrush and fluoride toothpaste
4. Floss daily
The Essentials of Brushing
The ADA recommends:
BRUSH 2x/day

Brushing tips:
45° angle/teeth & gums

Short, back & forth strokes

Brush outside, inside, and all chewing surfaces of teeth
The Essentials of Flossing

The ADA recommends: FLOSS daily between teeth

Flossing tips:
- Clean between each tooth, making a “C” shape
- Gently slide floss in between teeth and gums
- Don’t forget your back teeth

Image from ADA Patient Education Materials
MUCOSITIS OR INFLAMMATION OF MUCOSA

- Mucositis appears as painful sores in the mouth
- Oral mucosa is very sensitive to radiation therapy. Beginning at cumulative dose over 15 Gy and worsening significantly after 60 Gy
- Up to 90% of patients will have mucositis depending on dose, fraction size, and volume of irradiated tissue

Image courtesy of CDC and WHO.
MUCOSITIS OR INFLAMMATION OF MUCOSA

1. Rinses
   - Neutral rinses (1/2 tsp baking soda in 1 cup of water)
   - Topical analgesics (2% viscous lidocaine)

2. Preventive
   - Limit use of removable prosthetics
   - Eliminate use of alcohol and tobacco
   - Soft and bland foods, avoid hot, spicy, acidic, hard, sharp oral intake

3. Medical
   - Culture non-healing mucositis and treat appropriately
   - Systemic analgesics
• Radiation may cause up to a hundred fold increase in fungal populations
• Up to 27% of patients post-radiation get thrush
• Candidiasis is one of the most common lesions occurring in patients during cancer treatment

1. Culture – to determine most effective medication
2. Rinses with baking soda/water or chlorhexidine gluconate
3. Fungal vs. bacterial vs. viral
TRISMUS OR LIMITED RANGE OF MOTION

- Expected range of motion of mouth is an opening between 40-50mm
- Limited mouth opening incidence ranges from 5-38% of patients who receive radiation therapy
1. Stretching
   • Properly stabilized to control movement
   • Prolonged, low force stretch produces the greatest amount of permanent elongation
   • Pain tolerance should not be exceeded

2. Active Stretching
   • Tongue Blades
   • TheraBite

3. Passive Stretching
   • Dynasplint

Image from Therabite.
OSTEORADIONECROSIS

• Osteoradionecrosis is defined as exposed irradiated bone that fails to heal over a period of 3 months without any evidence of persisting or recurrent tumor.

• Prevalence ranges widely in literature from 0.4% to 56%
OSTEORADIONECROSIS

1. Avoid dental surgery such as dental extractions, dental implants, dental orthodontia after head and neck radiation therapy
2. Routine preventative dental care such as exams, cleanings, fillings, crowns, root canals are encouraged to promote lifelong dental health and avoid the need for dental surgery
OSTEORADIONECROSIS

- Treatment based on staging of osteoradionecrosis
- Can happen at any time after head and neck radiation therapy

Clinical Photos by Crystal Chang, DDS
PREVENTATIVE DENTAL CARE IS LIFELONG

- Treat infection and stabilize existing dentition
PREVENTATIVE DENTAL CARE IS LIFELONG

• Maintain dentition in good, working condition

Clinical Photos by Crystal Chang, DDS
WHAT CAN I DO

• Treatment of cancer patients requires a multidisciplinary approach of multiple teams of medical professionals working together to provide the best care

• Dental providers play an important role in the education of oral complications of cancer treatment

• Cancer survivors will require long term oral health care on a regular recall interval with dental professionals
QUESTIONS/CONCERNS

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