New Research on Women’s Oral Health

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Women’s Oral Health

- Diseases occurring exclusively in women
- Diseases predominantly in women
- Differently in women

Pregnancy gingivitis, Pregnancy tumor
TMD, Atypical Facial Pain, Sjögren’s Disease
Jaw pain in angina

Antibiotic Use and Oral Contraceptives

- Advise patient of potential risk of antibiotic reducing effectiveness of oral contraceptive.
- Recommend that patient discuss with her physician use of non-hormonal contraception.
- Advise patient to maintain compliance with oral contraceptives with antibiotics.

Pregnancy and Oral Health

Hormonal Changes
- increased estrogen and progesterone affect gingival tissues
Altered Maternal Dietary Intake & Nutrition
- increased maternal gut absorption & decreased renal excretion helps maintain Ca++ for oral health
Nausea and Vomiting

Gingival Inflammation During Pregnancy

- Occurs in 60-75% of pregnant women
- Gingival alterations occur in association with poor oral hygiene and local irritants.
- Hormonal and vascular changes exaggerate inflammatory response to local irritants.

Conclusions from Dr. Jeffcoat’s Study

Scaling and root planing reduces the rate of prematurity after accounting for other risk factors.
Oral care should be part of overall health care for the pregnant woman and for women considering becoming pregnant!
Think about oral health like folic acid—should have good oral health before becoming pregnant to decrease risk of adverse outcome.
Oral Health Care for the Pregnant Patient

- Healthy balanced diet
- Control bacterial populations-oral hygiene and professional care
- Prenatal fluoride-no known benefit
- Early childhood caries counseling

Oral Health Care for the Pregnant Patient

- For elective procedures, second trimester
- For emergency procedures, any time
- Dental radiographs, use lead apron
- Local anesthetics
- Recommendations for timing of dental visit based on convenience for mother, not scientific clinical trials

Human Immunodeficiency Virus

- Transmission - IV drug use, infected partner
- AIDS often asymptomatic in women until more advanced
- Oral candidiasis
  - debilitated patients (nursing home)
  - secondary to antibiotic therapy
  - immune deficiencies (diabetes, HIV+)

Treatment of Oral Candida

- **Topical**
  - Nystatin oral tablets (500,000 IU); One tab dissolved orally qid x 14 days
  - Nystatin liquid (100,000 IU/ml); 5ml (1 tsp) q6h x 14 days
  - Clotrimazole troches (Mycex); Dissolve one troche q3hr x 14 days

- **Systemic**
  - Ketoconazole (Nizoral) 200 mg. One tab qd x 10 days
  - Fluconazole (Diflucan) 100 mg. Two tabs initially, one tab qd x 13 days

Intimate Partner Violence

- *1 million women battered in 2010 by their intimate partner
- *affects 50% of US homes
- *physical injuries associated with non-accidental trauma
- * head and neck trauma result in care-seeking

CDC Statistics on Intimate Partner Violence

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>Men</th>
</tr>
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<tbody>
<tr>
<td>Rape</td>
<td>9.3%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Stalked</td>
<td>15.2%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Severe Physical Violence</td>
<td>22.3%</td>
<td>14.0%</td>
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What can dental professionals do?

- AVDR Tutorial – Ask, Validate, Document, Refer DVD
- 15 minute interactive DVD teaches dental professionals how to discuss this topic with patients.
- Two controlled trials demonstrated that the tutorial prepares dentists and dental students to help patients who are victims of domestic violence
- Reported in May, 2006 JADA

Anorexia Nervosa/Bulimia

- Often occur together
- 1-3% adolescent and young women
- Erosion of lingual surfaces of dental enamel
- Glossitis, mucositis or ulceration of soft tissue
- Enlarged parotid glands

Sjögren’s Syndrome

- Auto-immune disease affecting ~4 million people
- 90% affected are women
- Average age =50 years old
- 50% exhibit enlarged parotid glands
- Dry eyes and dry mouth
- Arthralgia, myalgia, fatigue

Salivary Flow Prescription Medications

- Acetylcholinergic medications
- Acetylcholine stimulates:
  - Muscarinic and nicotinic receptors
  - M2 receptors - salivary and lacrimal function
  - M3 receptors - cardiac rhythm changes

Prescription Medications

- Pilocarpine
  - 5 mg. tid (not to exceed 30 mg/day)
  - Treat for minimum of 90 days
  - Contraindications:
    - Asthma, glaucoma
  - Side effects:
    - sweating

- Cevimeline
  - 30-60 mg. Tid (not to exceed 180 mg/day)
  - Contraindications:
    - asthma, glaucoma, severe COPD
  - Side effects:
    - sweating

Salivary Substitutes

- Provide palliative relief from oral dryness
- Replace minerals and enzymes in saliva
- Can use prn
- Contraindicated-alcohol-based mouthrinses

Ingredients include:
- ions: Na, Cl, Mg, F, Ca, Phosphates
- flavoring: lemon, mint, neutral
- lubricants/sweeteners-glycerin, sorbitol, xylitol
- preservative-paraben
- enzymes- lactoferrins, peroxidases, etc
Caries Management by Risk Assessment (CAMBRA)

1) Think infectious disease and biofilms
2) Identify high risk/low risk patients
3) Identify risk factors and educate patient
4) Treatment plan to eliminate risk factors
5) Implement preventive strategies
6) Educate, educate, educate-patient, family, caregiver, friends, anyone who will listen.

Caries Prevention Strategies for High Risk Patients

Self-Care
- Fluoride dentifrice 3x daily
- Interproximal cleaning once/day
- 1.1% neutral sodium fluoride (gel or toothpaste)
- Chlorhexidine rinse for 2 weeks, q3-6 months
- Xylitol chewing gum

Professional Care
- Fluoride varnish applied q 3-6 months
- Or professionally applied 2% NaF
- More frequent recall intervals (2-3 months)
- Sealants, if applicable
- Bacteriologic monitoring
- Diet counseling

Women and Pain Conditions

- TMD
- Atypical Facial Pain
- Carpal tunnel
- Burning Mouth Syndrome

TMD and Atypical Facial Pain

- Occurs primarily in women 20-40 years
- Pain onset varies
- Etiology unknown, may be related to estrogen (receptors found in ligaments)
- Treatment primarily nonsurgical and palliative (relieve symptoms so patient can function and live normal life)
  - Medications (NSAID, Neurontin, botox)
  - Splints

Menopause

- A baby boom woman reaches menopause every 14 seconds
- Average age for women is 51 years
- Women will live 1/3 of their lives post menopause.
- Multiple oral symptoms can occur during menopause

Menopause and Oral Problems

- Osteoporosis
- Salivary changes (dry mouth)
- Pain and/or burning sensation
- Altered taste sensations
- Menopausal gingivostomatitis
Burning Mouth Syndrome

Defined as “burning pain in tongue or oral mucous membranes without clinical or laboratory findings”
Occurs primarily in women over age 50 yrs.

Possible Causes and Management

- Mucosal Disease
- Nutritional Deficiency
- Dry Mouth
- Cranial Nerve Injury

Diagnose and RX
Oral supplements
High fluid intake; sialagogue
Central pain control-
benzodiazepine, tricyclic antidepressant, gabapentin (neurontin)

Medical Management of Burning Mouth Syndrome

<table>
<thead>
<tr>
<th>Tricyclic Antidepressants</th>
<th>Anticonvulsants</th>
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<td>10-150 mg/day</td>
<td>300-1600 mg/day</td>
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<td>10mg at bedtime; increase dosage until burning relieved or side effects occur</td>
<td>100mg at bedtime; increase dosage by 100 mg q 4-7 days until oral burning relieved or side effects occur</td>
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Coronary Artery Disease

- Number one killer of women
- Risk of dying of heart disease 10X greater than risk of dying of breast cancer.
- Risk of dying of heart disease double risk of dying of any cancer.

Heart Disease Assessment

Blood Pressure - 120/80
Blood Sugar – diabetes
C-Reactive Protein – measure of inflammation
Cholesterol – less than 200 mg/dl
Lipid Profile
LDL should be low (bad)
HDL should be high (good)
Stress Test
ECG or Echo or MRI

Dental Implications of Heart Disease

- Check out your medical history form
- Does it identify types of heart disease?
- Review patient’s medical history
- It will take more time!
- Know patient’s medications & devices
- Digoxin, pacemaker, defibrillator
- If unclear, unsure or have any questions, see consultation with patient’s physician and/or cardiologist
- Fax letter to physician asking your question
Current Recommendations for HRT

- “It is actually quite safe to take hormones for 5 to 10 years after menopause. If you minimize a women’s exposure to progesterone, you minimize her slight risk of breast cancer. Meanwhile, the estrogen will have a beneficial effect on her brain, skin, her bones and her heart.”

  Dr. Wulf Utian  
  Founder of NAMS  
  WSJ, 9/28/2011

- Consult your physician

Osteoporosis

- Loss of bone mass and architecture  
- Increased risk of fracture  
- Female to male ratio 4:1  
- 1.5 Million fractures annually

Risk of Osteonecrosis of the Jaw

- Higher for IV bisphosphonate use (multiple myeloma, metastatic CA to bone) than oral bisphosphonate use (osteooporosis)  
- Low incidence in first 6 months after starting IV bisphosphonate therapy.

Treatment of Osteonecrosis of Jaw

- Do not debride-lesion only gets larger  
- Antibiotics-Amoxicillin+Metronidazole or Levaquin for infection  
- Good daily hygiene and chlorhexidine daily rinse  
- Counsel patient that you can manage this oral side effect, while the patient manages their cancer therapy.


Strategies for Patients taking Bisphosphonates

- Take a good history  
  Oral bisphosphonates < IV Bisphosphonates  
- Treatment Planning  
  Informed Consent  
  Tooth Conserving procedures (endo v. extraction)  
- Prevention  
  Good oral hygiene  
  Regular dental visits  
  Consult with patient’s oncologist

Incidence of Hip Fractures

- 1 in 3 adults over age 65 falls each year  
- Hip fractures result in greatest number of deaths and morbidity  
- Women account for 80% of the 300,000 hip fractures annually
2015 Guidelines for Patients with Prosthetic Joints

Clinical recommendations:
- In general, for patients with prosthetic joint implants, prophylactic antibiotics are NOT recommended prior to dental procedures to prevent prosthetic joint infection.
- For patients with a history of complications associated with their joint replacement surgery who are undergoing dental procedures that include gingival manipulation or mucosal incision, prophylactic antibiotics should only be considered after consultation with the patient and orthopedic surgeon.
- To assess a patient’s medical status, a complete health history is always recommended when making final decisions regarding the need for antibiotic prophylaxis.


What is the prudent clinician to do?
- When in doubt, discuss with patient & consult the patient’s orthopedic surgeon
- If prophylactic antibiotics are recommended prior to dental procedures to prevent prosthetic joint infection, prescribe the antibiotics.
- Another option—have the patient’s orthopedic surgeon prescribe the antibiotics.


Current Recommendations:
- Amoxicillin
  2 gr orally 1 hr prior to dental procedure
- If allergic to Penicillins:
  Clindamycin 600 mg 60 min prior to dental procedure
  Cephalexin 2 gr 60 min prior to dental procedure

Summary of Women’s Oral Health
- Women’s hormones affect oral tissues as well as reproductive tissues.
- Women’s reproductive cycles will affect oral health with unique diseases and/or conditions.
- Systemic health problems will affect oral health
- If patient presents with unusual signs or symptoms, it is critical to take her symptoms seriously and try to solve her problem. Your patient is watching you learn.