The Oral Systemic Connection

The Significance of Periodontal Infection in Cardiology
(3 CEUs)

Chronic Inflammatory Periodontal Disease
A risk factor for cardiovascular disease and ischemic stroke?

Strategies for Dental Hygienist and Nurse Collaboration in Targeting Periodontal and Cardiovascular Diseases
The Public Knows!

You’d better know too!

Time Magazine
Feb 23, 2004

Readers Digest

Colgate Marketing

The Secret Killer

The surprising link between INFLAMMATION and HEART ATTACKS, CANCER, ALZHEIMER'S and other diseases

What you can do to fight it
The Legal Profession Knows

Periodontal Disease has been connected scientifically to the following systemic diseases:

- Heart Disease
- Diabetes
- Premature Births
- Stroke
- Other Dental Malpractice Issues
- Other Medical Malpractice Issues
- Other Systemic Diseases

Location
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Experienced Attorneys

If you or someone you know had periodontal disease, diagnosed or undiagnosed, and either ignored or treated unsuccessfully, before or during the same time as any of the mentioned systemic diseases, you may be eligible for damages caused by these systemic diseases.

Please complete the contact information or phone my office for a free consultation. I am committed to providing you with the expertise necessary to meet your medical and dental malpractice needs.

At my law office, you, our client, comes first. We will do whatever is necessary to defend and uphold your legal rights.

Periodontal Disease Facts

- For Diabetics with severe periodontal disease, the mortality rate was 7.5 times higher compared to diabetics with no periodontal disease.
- For Norms with severe periodontal disease, the premature birth rate was 7 times higher than normal.
- In a research group, the top 25% CRP participants had 2.5 times higher risk of colon cancer compared to the bottom 25% CRP group.
- In a research group, the top 1/3 CRP values had twice the heart attack rate compared to the bottom 1/3 CRP group.

www.meddentlaw.com/
PERIODONTAL DISEASE HAS BEEN CONNECTED SCIENTIFICALLY TO THE FOLLOWING SYSTEMIC DISEASES

- Heart Disease
- Diabetes
- Premature Births
- Stroke
- Other Dental Malpractice Issues
- Other Medical Malpractice
- Other Systemic Disease

PERIODONTAL DISEASE FACTS

- For Diabetics with severe periodontal disease, the mortality rate was 7.5 times risk over normal compared to diabetics with no periodontal disease.
- For Moms with severe periodontal disease, the pre-term, low birthweight, babies was 7.5 times risk over normal.
- In a research group, the top 25% CRP participants had 2.5 times rate of colon cancer compared to the bottom 25% CRP group!
- In a research group, the top 1/3 in CRP values had twice the heart attack rate compared to the bottom 1/3 CRP group!

EXPERIENCED ATTORNEYS

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ORAL DISEASE AND SYSTEMIC DISEASE

Inflammatory oral disease, notably periodontal disease has been associated in the literature to increased risk for Heart Disease, Diabetes, Premature Births, Color Cancer, Stroke, Macular Degeneration, Dementia, Alzheimer’s Disease, Osteoporosis, Duodenal Ulcers, and Respiratory Disease.
The Medical Profession Knows?

Information is still early for them

The oral-systemic connection has been ‘fringe’ until recently. (Remember Paul Keyes, baking soda, peroxide…?)

Until now, there has been a scarcity of research

Drug companies haven’t targeted the class of pro-inflammatory mediators or markers

Until now, P.D. hasn’t been their problem
The Medical Profession Knows

- Awareness and body of knowledge is growing about pro-inflammatory mediators and their sources: cytokines, chemokines, prostaglandins, TNF-α, IL6, CRP, etc.
- Respected research now links P.D. with systemic diseases.
- Moving beyond a “link” and toward cause/effect with double-ended arrows. (Systemic-Oral Connection?)
Numerous studies establish C-reactive Protein as a significant risk factor for CVD.

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<th>Study/Reference</th>
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Relative Risk (upper vs lower quartile)
Risk Factors for Future Cardiovascular Events: WHS

- Lipoprotein(a)
- Homocysteine
- IL-6
- TC
- LDLC
- sICAM-1
- SAA
- Apo B
- TC: HDLC
- hs-CRP
- hs-CRP + TC: HDLC

Relative Risk of Future Cardiovascular Events

Ridker et al, N Engl J Med 2000;342:836-
Inflammatory Stimuli / Antigens

Vascular activation
Adhesion molecules
Chemokines

Immune activation
Interferon-γ
Co-stimulatory factors

IL-1, TNF-α

Interlukken-6

C-reactive Protein

The CRP Cascade

Liver
Effects of Chronic Inflammation

Inflammatory stimuli: pathogens, oxidative stress, free radicals, environmental factors, infections, damaged tissue

Pro-inflammatory cytokine production

Inflammation

Insulin sensitivity

Hyperlipidemia

Atherosclerosis

Diabetes mellitus

Stroke / Heart Attack

See: Grimble, Curr Opin Clin Nutr Metab Care 2002;5:551
Do atherosclerosis and type 2 diabetes share a common inflammatory basis?

Is there evidence that inflammation *precedes* the onset of type 2 diabetes (implying an integral role for inflammation in diabetogenesis).... or is the presence of inflammatory markers among those with insulin resistance and/or diabetes nothing more than an epiphenomena of the disease state itself?

Pradhan A, Ridker PM. Eur Heart J 2001
More Than a Marker: Does CRP Play A Direct Role in Atherothrombosis?

CRP localizes in atherosclerotic but not normal intima

CRP induced complement activation

CRP induced production of cell adhesion molecules, VCAM-1, E-selectin, MCP-1, ET-1, MMP-1, MMP-9

CRP dependent monocyte recruitment into arterial wall

CRP induced production of tissue factor in monocytes

CRP based blunting of endothelial vasoreactivity

CRP mediated LDL uptake by macrophages

CRP attenuates NO production decreases eNOS expression

CRP induced PAI-1 expression stabilizes PAI-1 mRNA

CRP triggered oxidation of LDL cholesterol

Ridker PM. Circulation 2003;108:2292-97
Summary: Oral-Systemic Link
- My Opinion -

- Medical profession - slow to uptake & implement.
- Personal injury / medical malpractice attorneys will seize opportunity and compel physicians to deal with P.D. by referring to dentists. This will become “The Big Push!”
- New medical/legal standard-of-care.
- Pro-active dentists who brand & position themselves properly with state-of-the-art equipment, current knowledge, and modern procedures, will benefit most.
Summary: Dental-Medical Link

- My Philosophy -

- Don’t make physicians look bad. Edify them.
- Defer/refer management to them (CRP has other sources and is not a solitary risk factor).
- Assume they already have the lab work done. Ask for results and/or give them the option of doing lab work.
- Purpose is to help MDs improve pt care & solve a problem they can’t solve without our help.
- Purpose is to help them avoid malpractice & treat their patients better.
Use every patient as a conduit to their physician.
Send patient status reports, Med Hx reviews/requests, lab results, progress reports, etc.
Position as the expert uniquely qualified to treat chronic oral infections. (We’re not just “any” dentist !)
Educate physicians with newsletters, new research summaries, pt. communications, public awareness – (“We know what we are talking about!”)
You can’t take posture in case presentation until you develop an overall plan and know how you will approach it.

1. Set Stage – Posture, Belief & Marketing
2. Pt. Interview - Problem Identification
3. Explain Philosophy
4. Diagnose
5. Report of Findings
6. Education – Informed Decisions
7. Prescription – Tell them what to do
Setting the Stage
The Dentist’s Posture

- Get serious. Chronic oral infections have life/death consequences for your patients.
- Legal standard-of-care is shifting. Undiagnosed Perio is already the leading cause of dental malpractice.
- You can’t not do this. You can’t not say something.
- Establish new state-of-the-art tx protocols.
- We’re duty-bound & legally required to diagnose, inform, and prescribe. Do not back down!
- Learn how to “sell”. Make effective case presentations. Learn new verbal skills.
Setting the Stage
The Dentist’s Posture

- In dentistry, current standard-of-care lets you manage disease. (These standards will change).
- You don’t have to treat at the minimum.
- If Pt doesn’t value it, let their MD deal with it.
- Our job - Diagnose, inform, and advise. We are a consultant to our patients.
- Get signed statement documenting you have informed them.
- When they’re ready, aggressively treat them.
- Charge for it. Make it something to value.
Setting the Stage
Marketing Philosophy

Everything we do is marketing! Everything!
Everything counts!
If you don’t believe it, how will they?
Positioning doesn’t deal with products or services. Positioning deals with perceptions. What do you want your patients to perceive?
How will you differentiate yourself from all others floating along on the “sea of sameness”? 

"In our factory, we make lipstick. In our advertising, we sell hope." - Charles Revlon

“A good ad should be like a good sermon: It must not only comfort the afflicted, it also must afflict the comfortable.” -- Bernice Fitz-Gibbon
Setting the Stage
Marketing Plan

Internal
- Existing patient education and diagnosis
- Newsletters
- Friends & Family referrals

External
- Media – press release, display ads, advertising, news stories, radio/TV, etc.
- Professional Communications – newsletters, patient status reports, fax blasts, literature, etc.
- Outbound marketing – Muffin runs, expos, events, cross promotion, joint-ventures, etc.
Pt. Interview – Identify Problem & Values Clarification

# 1 Rule: You can’t sell a solution to someone who doesn’t have a problem. **Get their problem!**

Key = **Active Listening** – Ask lots of questions. “Please tell me why you’re here.” “Ah-huh” “How do you mean exactly?” “Is that right!” “And then what happened?” “How would that make you feel?” “What would happen if…?” “What’s important to you about your teeth?” “What would it cost you to not have your teeth?” “Are you worried about …?” “Would it concern you if …?” “If you had a chronic infection in your body that could lead to a heart attack or stroke or diabetes, would you want to know about it?”

“If you must speak, ask questions” – Omer Reed
Pt. Interview – Begin Paradigm Shift

# 1 Patient Answer: “I don’t want to lose my teeth or get dentures, unless I have to,” or “I want to keep my teeth as long as I can.”

“How do you feel about your nose, elbow or other body parts? Do you want to keep them as long as you can too?

“If you found out that you didn’t have to lose your teeth, how would that make you feel?”

“Sounds like you’re here to save your teeth... Are you prepared for the financial investment that might require?

Flushes out insurance (not ‘major-dental’ or a pay-all), the “yea-buts”, and the “…unless I have to…” conversations.

Let’s be honest and admit that for some people there are other things in life that are more important than the health of their teeth and gums – things like Christmas, vacations, cars, trucks, boats, recreation, etc.
3- Explain Your Philosophy

After you’ve heard about their problems, complaints and requests, tell them you’ll

– do an exam

– get objective information about their problem

– see if they have other problems they should know about, and

– then make some recommendations about how to solve their problems, and those you discover.
“But before we do…”

“You may have heard about us already, but let me take a moment and tell you a little about us. This will help you understand how we’ll look at your situation and how we can help you solve these problems you’ve described.”

Describe your philosophy and the difference between old-school “Disease Medicine”, and your modern “Wellness Medicine”.

Define the benefits to them and how it will cost them less and improve their health more.

Disease is costly – wellness isn’t!”
Diagnosis

- Examination thorough enough to allow you to discuss any problems that you discover.

1. Periodontal probing
2. Bleeding scores
3. Restorations – failing, ill-fitting, etc.
4. Phase contrast microscope
5. Mouth odor
“When you advertise fire extinguishers, open with the fire.” - David Ogilvy

Most buying decisions are emotional. Your case presentations should be too.

“The chief merit of language is clearness, and we know that nothing detracts so much from this as do unfamiliar terms.” – Galen, 129-199

Practice good verbal skills to create word pictures. Give accurate report and create lots of emotion.

Use photos, intra-oral pictures, brochures, etc.
“How long have you had that infection?”

“That would be gross if you took some of this puss and wiped it onto a soda cracker and ate it! – Did you know that’s like what happens every day with this cottage cheesy bacteria stuff growing around your teeth and gums.”

“This smells like something crawled in there and died. Do you ever wonder what other people think when you talk with you – like at work, with a client, a friend, or with your spouse or lover?”
“Your best friend might tell you if you stepped in dog poop, but they probably won’t tell you when you have bad breath. Well … I’m not your best friend yet, and these germs have been pooping around your gums, leaving them full of puss and the stuff that makes that rotten smell that others won’t tell you about, except when they offer you a breath mint....”
“If puss ever came out from under your knee-cap, would that concern you?”

“If you washed your hands, and your skin started bleeding, would that concern you?”

“If you combed or brushed your hair and you noticed blood on your comb, would you be a little worried?”

“Bleeding gums means you have an infection, with flesh-eating bacteria and their poisons eating their way under your skin, getting into your blood stream and possibly damaging your heart, brain, lungs, blood vessels, and bones (and if pregnant, your baby). Would that worry you?”
Periodontal disease is an inflammatory reaction to a chronic bacterial infection that affects the gums and bone supporting the teeth.

“Perio” = around

“dental” = tooth
- If you don’t keep bacteria under control, the body must try to defend itself with an immune system response beginning with inflammation.

- Your gums begin to look at your bacteria covered tooth as a foreign object.
- Think of a splinter embedded under your skin. If you can’t remove it right away, the body starts an inflammatory process to defend itself from this foreign object. The skin around the sliver festers up with puss and inflammation until it expels the object from the body.

- The same phenomenon happens around dirty teeth.
Consequences of Periodontal Disease

Bacteria and their by-products enter blood stream and spread freely through the body

Bacteria grows below the gum line. Toxins irritate gum tissue & start an inflammatory response

Connective tissues and supporting bone break down and degenerate

Heart disease, stroke, osteoporosis, lung disease, blood vessel damage, pregnancy complications, etc.

Gums are infected & pull away from teeth, bone dissolves, gum pockets deepen, teeth loosen, breath stinks, etc.
Periodontal Disease is Linked to:

- Osteoporosis
- Ulcers
- Diabetes
- Kidney Disease
- Arthritis
- Pregnancy Complications
- Alzheimer’s
- Heart Disease & Stroke
6- Periodontal Disease Education

Results of tooth loss

Bone Loss

Inflamed Gum Attachment

Bacteria in the mouth

Gums

Tooth
Early signs of gum disease & bacterial inflammation are determined by:

- Bleeding gums
- Soft, or tender, or red, or inflamed, or boggy gums

Remember …

If the gums bleed, bacteria is entering the blood stream!
Describe options: (Remember – keep your posture!)
1. No treatment (dismiss)
2. Refer to periodontist - surgical tx will lower gums around teeth. (This still may be necessary in refractory cases).
3. Tissue Therapy Program – SRP, laser, antimicrobial, nutrition, behavior modification, smoking cessation

Make recommendation for treatment.
Work out financial arrangements. (2/3 or 3/4 the cost of traditional surgery).
“Our culture and insurance industry says it’s okay to lose your teeth. Some people know the price of everything and the value of nothing.”
Scaling and Root Planing (SRP) - removes calcified tartar and calculus around the gum line.

Anti-microbial Rinses – kills bacteria and creates an unfriendly environment for bacteria.

Laser Therapy - a non-surgical – removes diseased gum tissue, endotoxins and bacteria, and repairs gum pockets.

Accelerated Home Care – daily support of health with anti-microbial rinses and pastes and new hygiene techniques.

Nutritional Therapy – provides important ingredients to repair connective tissue, lower inflammation, and support health.
Special Considerations
Existing Patient - Active

How do you talk to an existing active patient with problems?

“It looks like we are beginning to develop some problems here …”

“What we’ve been doing just doesn’t seem to be working …”

“We generally try to be as conservative as we can initially, but we must get more aggressive if we find our efforts aren’t enough.”
Special Considerations
Existing Patient - Active

- Must be “face-saving” and graceful.
- Often they have failed while under care of periodontist, or your recare program.
- If they’ve followed professional recommendations, they may believe what they are already doing is enough to prevent further problems.
- Usually, the SRPs, cleanings, etc has already been completed. Just add the remaining CDM protocol steps and adjust fee accordingly.
Special Considerations

Existing Patient – Not Active

- Talk about relapse - “while you were on vacation, the bacteria moved in”.
- With absence of recommended recare interval, good home care, use of oral hygiene devices, and nutrition products - the “promise” is gone.
- Take posture and ask if they are serious about obtaining health, keeping teeth, and preventing systemic complications. If not, consider referring them to periodontist, dismissing them, and referring to medical doctor for evaluation of risk factors.