

Periodontal Health in Oklahoma

Oklahoma Center for
Implants & Periodontics

Our Mission Statement

Changing the Lives of
Patients

Our office changes the lives of people through premiere service and the highest quality of implant and periodontal treatment offered today.

Robin D. Henderson, D.M.D.,
M.S.

Diplomate of the American
Board of Periodontology

Emphasis on Comprehensive
Periodontics, Soft Tissue
Grafting, and Dental Implants

In This Issue

Implant Failure - What to
Look For

Using Lasers in Dentistry

Special Section: Case Study
Bisphosphonates and
Osteonecrosis of the
Jaw

Team Highlight - Trish
Holiday Wishes

Contact Us:

3330 NW 56th Street
Suite 110
Oklahoma City, OK 73112

(405) 947-0486
(405) 942-4392 FAX

www.OkPerioImplant.com

Editor:
Dawn Wilson, RDH, BA

Volume 1 Issue 5

December 2008

Recognizing Implant Problems and Failure

Implant dentistry is no longer considered experimental and is now the standard of care when it comes to tooth replacement. With more and more information out there for patients, their knowledge base is expanding. Patients now look at implants as the desired tooth replacement method. Our role is to help educate them and contribute to their knowledge with accurate information about how implants play a role in their dental health.

Implant therapy has increased over the last ten years and continues to look bright for future implant treatment therefore the role of the hygienist in educating and continuing care is most important. As I have mentioned on numerous occasions, the hygienist is the most important role in the dental office.

Let me dispel a few myths regarding implants, of course there are exceptions to the rule but

Failing Implant placed one year ago: recession and exposed threads



basically implants are relatively painless, preserve bone, a conservative treatment compared to traditional dentistry, a relatively quick procedure (most

times less than an hour), more permanent than traditional dentistry, patients do not have to be put to sleep, and similar in cost compared to traditional dentistry.

It is our role to fully educate the patients on all aspects of dentistry, whether the patient accepts treatment or not. Discuss all the pros and cons and recommendations for each individual situation and recommended treatment. Just because someone loses a tooth it does not mean they should get an implant. Is the bone adequate? How is their health? There are many questions to ask before determining a patient as a good implant candidate, at least offer the information and the opportunity to be more informed.

In addition to providing information, we should remove our bias when helping them make an educated decision. I notice in some offices dentists may do implants but are not adequately trained to do sinus lifts and bone grafts. Instead of referring the patient to someone who can, the doctor tells the patient they are not a candidate for implants, which is not always true.

Continued on Page 2



Robin D. Henderson, DMD, MS

Added Benefits of Lasers for Perio Treatment

Laser treatment for Periodontics and dental hygiene is not a new treatment but an important topic to discuss.

Periodontal disease has been treated for decades without the use of lasers quite effectively. So why use lasers today? Lasers are a tool that assists treatment of periodontal disease more effectively and thoroughly.

Here are some benefits of using the laser. During regular hygiene recall visits the laser allows the operator to remove diseased tissues and gain

access to pockets. It thoroughly removes all the debris so the operator can see what they are doing. It allows hygienists to do a better job. Another reason is the perceived value to the patients. You show concern about your patient's health and use the best technology available to help your patients.

Another benefit, depending on the laser, it doesn't bother the patient. Simply place some topical when removing tissue then access to the area will not hurt the patient. Trust me they like that!

Continued on Page 5

Cont...Identifying Implant Failure

"Once the threads are exposed to the oral cavity environment bacteria impregnates the threads and micropores of the implant body creating a real problem."

The patient then makes their decision based on incorrect and inadequate information. The bias is that the patient will not want to see a specialist or want to pay for the necessary sinus lift or bone graft. I believe the patient should know the options then make their decision based on all available information. This is a really touchy situation and potentially can lead to medical and legal ramifications. Be informative and help patients make educated decisions.

As more and more implant cases are done each year, the number of recall visits on patients with implants should increase. Treat implant crowns and implants just like normal teeth. Plastic instruments may be used, but really not necessary. Avoid being extra gentle around implants; be as aggressive as if it were a normal tooth. If you don't, there will be problems.

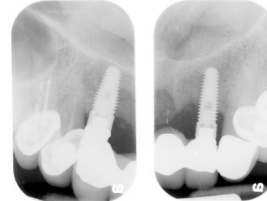
There are a few things to identify on all implant patients. Always note the probing depth on implants, not just the number. Look at the tissue's consistency and make sure it stays pink, healthy and firm. Identify bleeding areas and address them early, do not wait until they get out of control. Look for tissue recession around the implant. If tissue recedes it needs to be fixed immediately.

Harder to identify, but almost more important is tissue thickness. If tissue is thin, whether around an implant or natural tooth, it needs grafting soon. Some clues for tissue thickness are seeing the probe through the tissue, visualizing blood vessels through the tissue, localized band of inflammation on an isolated area, and obvious root prominence. These are signs of future tissue issues if left unaddressed.

If tissue (bone or gums) are too thin around an implant they become necrotic beginning the breakdown then threads become exposed.



Implant failure with bone loss and recession



Left: #11 early bone loss

Right: #7 severe bone loss

Biologically, once the threads are exposed to the oral cavity's environment bacteria impregnates the threads and micropores of the implant body creating a real problem. Bacteria remain embedded in the implant and continue to break down the bone and surrounding tissues until the implant eventually falls out.

If you see or feel deep pockets or recession around an implant, the patient should be seen by a specialist very soon. If you see or feel threads on an implant the implant needs immediate attention by a specialist.

Once an implant's threads are exposed, sometimes the only treatment is to remove the implant and start over. Occasionally, a bone graft around an implant may be successful but it is very difficult.

As I mentioned earlier, the role of the hygienist is increasingly more demanding when caring for implant patients. Be diligent in identifying and treating problems early before things get out of hand.



Send your questions to Robin,
Robin@OkPerioImplant.com

Ask Dr. Henderson...

Q: Besides staining, why do you recommend Prevention over Peridex? Do you dispense prescription strength or OTC?

A: I like Prevention mainly because of the staining aspect. Studies have shown that it doesn't really matter what agent you use as a mouth rinse, because they all work about the same. I like Prevention because of the zinc component to promote healing as well as the hydrogen peroxide as a simple agent to kill off bacteria. I use

the prescription strength because of the more concentrated hydrogen peroxide component.

Q: We have a laser we use in our office to treat periodontal disease. I was wondering what you thought about lasers used in dentistry. I was at the Hygiene Expo but I did not think about this question until it was too late! If you don't mind I was curious as to what you thought! Thanks - Darcie

A: I personally have multiple lasers and use them almost daily. Some of it to control disease and some of it to treat the disease, but my methods would be different from hygienists because I am allowed to do much more than you. I do feel that lasers have a great place in dentistry and will be around more and more. I think that the biggest issue with lasers is from the training side of things. You must be trained properly and you must use them correctly. Without training and the proper use, you will cause some problems.

Osteoporosis and Bisphosphonates in Dentistry

One of the most difficult and costly issues in health care for the aging population is bone decay, not only with periodontal disease, but overall bone degeneration. The breakdown of bone throughout the body leads to further medical problems and expenses, most commonly broken bones and surgical repair.

A group of medications were developed over the years to combat this health care problem. The family of medications is more commonly known as Bisphosphonates. There are newer medications, but most fall in this category.

Osteoporosis is a bone disease that leads to increased risk of fracture. In osteoporosis the bone mineral density (BMD) is reduced, bone micro architecture is disrupted, and the amount and variety of non-collagenous proteins in the bone is altered. Osteoporosis is most common in women after menopause, called **postmenopausal osteoporosis**, but may also develop in men. It can also occur in anyone with particular hormonal disorders and other chronic diseases or as a result of medications, specifically glucocorticoids, called **steroid- or glucocorticoid-induced osteoporosis (SIOP or GIOP)**. Given its influence on the risk of fragility fracture, osteoporosis may significantly affect life expectancy and quality of life.

Osteoporosis can be prevented with lifestyle changes and sometimes medication; in people with osteoporosis, treatment may involve both. Lifestyle change includes preventing falls and exercise; medication which includes calcium, vitamin D, bisphosphonates and several others. Fall-prevention advice includes exercise to tone deambulatory muscles, proprioception-improvement exercises; equilibrium therapies may be included. Exercise with its anabolic effect, may stop or reverse osteoporosis.

The underlying mechanism in all cases of osteoporosis is an imbalance between bone resorption and bone formation. In normal bone, there is constant matrix remodeling of bone; up to 10% of all bone mass may be undergoing remodeling at any point in time. Bone is resorbed by osteoclast cells (which derive from the bone marrow), after which new bone is deposited by osteoblast cells.

Treatment - Bisphosphonates

In confirmed osteoporosis, bisphosphonate drugs are the first-line treatment in women. The most often prescribed bisphosphonates are presently sodium alendronate (Fosamax) 10 mg a day or 70 mg once a week, risedronate (Actonel) 5 mg a day or 35 mg once a week and/or ibandronate (Boniva) once a month.

Oral bisphosphonates are poorly absorbed, and must be taken on an empty stomach, with no food or drink for 30 minutes. They cause esophagitis and are sometimes poorly tolerated; weekly or monthly administration (depending on

the preparation) decreases likelihood of esophagitis, and is now standard. Although intermittent dosing with the intravenous formulations such as zoledronate avoids oral tolerance problems, these agents are implicated at higher rates in a rare but unpleasant mouth disease called osteonecrosis of the jaw. For this reason, oral bisphosphonate therapy is probably preferred, and prescribing advice now recommends any remedial dental work to be carried out prior to commencing treatment.

Osteonecrosis of the jaws (ONJ) is a severe bone disease that affects the jaws, including the maxilla and the mandible. Jaw bone damage and death occurs as a result of reduced local blood supply. The condition is thus included in the general category of ischemic or avascular osteonecrosis (literally "dead bone resulting from poor blood flow").

Persons with ONJ may have either necrotic bone or bone marrow that has been slowly strangulated or nutrient-starved. Bone with chronically poor blood flow develops either a fibrous marrow since fibers can more easily live in nutrient starved areas, a greasy, dead fatty marrow (wet rot), a very dry, sometimes leathery marrow (dry rot), or a completely hollow marrow space (osteocavitation), also typical of ONJ. The blood flow impairment occurs following a bone infarct, a blood clot forming inside the smaller blood vessels of cancellous bone tissue.

ONJ, even in its mild or minor forms, creates a marrow environment that is conducive to bacterial growth. Since

Osteoporosis

- ◆ Imbalance between bone resorption and bone formation
- ◆ Leads to increased risk of bone fracture
- ◆ Most common after menopause
- ◆ Preventable with lifestyle changes and medication
- ◆ Commonly prescribed Bisphosphonates: Fosamax, Actonel, Boniva

This patient is a 76 year old female with a history of smoking and five years on Oral Bisphosphonates. The problem began with the posterior implant in Fig. 1. In Fig. 2 the new implants were placed too close together and bone loss started progressing. Fig. 3 the posterior implant was lost and bone began sloughing. Fig. 4 and 5 show more bone loss as it approaches the nerve. Fig. 6 shows the bone loss in the nerve and the patient is experiencing numbness. Fig. 7 result is possible bone fracture.

Implant dentistry was performed by other dental provider.

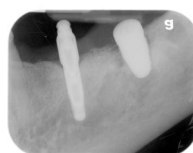


Figure 1: 10-6-04



Figure 2: 1-3-06



Figure 3: 9-21-06

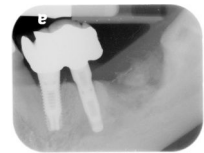


Figure 4: 1-23-07

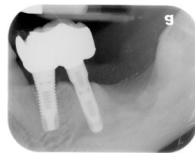


Figure 5: 6-12-07



Figure 6: 10-11-07

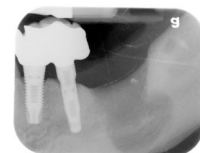


Figure 7: 4-8-08

Cont...Osteonecrosis of the Jaw

"Bisphosphonates associated ONJ concluded that the mandible is more commonly affected than the maxilla (2:1 ratio) and 60% of cases are preceded by a dental surgical procedure."*



many individuals have low-grade infections of the teeth and gums, this probably is one of the major mechanisms by which the marrow blood flow problem can worsen; any local infection/inflammation may cause increased pressures and clotting in the area involved. No other bones have this mechanism as a major risk factor for osteonecrosis. A wide variety of bacteria have been cultured from ONJ lesions. Typically, they are the same microorganisms as those found in periodontitis or devitalized teeth. However, according to special staining of biopsied tissues, bacterial elements are rarely found in large numbers. So while ONJ is not primarily an infection, many cases have a secondary, very low-level of bacterial infection and chronic non-suppurative osteomyelitis can be associated with ONJ. Fungal infections in the involved bone do not seem to be a problem, but viral infections have not been studied.

Bisphosphonates may alter the disease process

In the past few years, thousands of cases of ONJ in patients on bisphosphonate therapy have been diagnosed usually following lack of healing after a dental extraction but also in cases of spontaneous exposure of the cortical bone tissue through the gingiva and mucosa.

The recent increase of such cases has been linked with a major emphasis on the therapeutic use of bisphosphonates for osteoporosis, especially since hormone replacement therapy has been shown to increase the risk of breast cancer, clots and cardiovascular disease in women following the 2003 findings of the U.S. Women's Health Initiative study. Two classes of bisphosphonates are presently prescribed:

Non-nitrogen containing bisphosphonates such as etidronate (Didronel)

Nitrogen containing such as alendronate (Fosamax), pamidronate (Aredia), zoledronate (Zometa), risedronate (Actonel) and ibandronate (Boniva).

The nitrogen containing bisphosphonates are the most potent inhibitors and no case of ONJ associated with etidronate has been reported yet. The main pharmacological action of bisphosphonates is inhibition of the osteoclast driven bone resorption. This is achieved by shortening osteoclast lifespan via apoptosis and by inhibiting osteoclast activity and recruitment on the bone surface. When a bisphosphonate binds to bone mineral, osteoclast resorb both bone and the bound bisphosphonate. During bone formation, if any, bisphosphonate remaining on the surface of the bone is covered and remains there until future osteoclastic bone resorption occurs at the site. This explains why inhibition of bone resorption continues long after bisphosphonate treatment has been discontinued.

This form of therapy has been shown to prevent loss of BMD as a result of a reduction in bone turnover. However bone health entails quite a bit more than just BMD. There are many other factors to consider.

In healthy bone tissue there is a homeostasis between bone resorption and bone apposition. Diseased or damaged bone is resorbed through the osteoclasts mediated process while osteoblasts form new bone to replace it, thus maintaining healthy bone density. A process commonly called **remodeling**.

However, osteoporosis is essentially the result of a lack of new bone formation in combination with bone resorption in reactive hyperemia,

related to various etiological and contributing factors, and bisphosphonates do not address these factors at all.

An individual who is already having problems with osteoporosis/osteonecrosis of the jaws due to the effects of these etiological factors will be more susceptible to the adverse effects of bisphosphonates. In theory, by suppressing osteoclastic activity and bone resorption, any ischaemic-damaged bone will be left in situ instead of being resorbed. The damaged bone will not be repaired either if the factors already inhibiting osteoblastic activity are still present. Therefore the amount of osteonecrotic tissue should be expected to increase until it reaches a level when any trauma or insult to this necrotic bone will result in extremely poor healing, exposed necrotic bone to the oral environment, development of pain, and increased risks of microbial infection, as effectively seen in bisphosphonates associated cases of ONJ.

In a systematic review of cases of bisphosphonates associated ONJ concluded that the mandible is more commonly affected than the maxilla (2:1 ratio) and 60% of cases are preceded by a dental surgical procedure. According to studies, over suppression of bone turnover is probably the primary mechanism for the development of this form of ONJ, although there may be contributing co-morbid factors.

It is recommended that all sites of potential jaw infection should be eliminated before bisphosphonate therapy is initiated in these patients to reduce the necessity of subsequent dentoalveolar surgery. The degree of risk for osteonecrosis in patients taking oral bisphosphonates, such as alendronate (Fosamax), for osteoporosis is uncertain and warrants careful monitoring.*

*Sources used to support this article came from the American Academy of Periodontology, www.perio.org, Wikipedia and the National Institute of Health

'Tis the Season to Give You Thanks, Giving Back

I am as guilty as the next person not giving others the thanks and recognition they deserve, so I want to make sure I do. Thank you for your continued support and what you do for our patients and the dental community.

Thankfully, it's been a good year overall. Many of you may have experienced directly or indirectly tough times given the current economic conditions and see patients dealing with it too. It is a good time to consider being more conservative and mindful of what we do. Recycle when you can, be less wasteful, save more instead of spending frivolously and most importantly, find ways to help others.

Although monetary donations help, be creative. Rake a neighbor's leaves, take out their trash, drive someone somewhere, talk to someone who is down, or give a hug or smile. Have you seen the response when you go out of your way to help, smile or just say hello? It lifts their spirits and sometimes yours too.

In a world where we tend to be self centered, it is good to get back to simpler more giving times, knowing what really matters in the end; family, friends and caring for others. I challenge everyone during the holiday season to do something out of the ordinary, help someone you wouldn't nor-

mally help. Don't expect anything - do it just to help. No one is going to quiz you about it, but you will know.

I think of the silly cliché, when the going gets tough... let's stick together and work closer as a team during these tough times. Help our neighbors and those less fortunate than us, because, we are fortunate our jobs are fairly stable and we are able to provide for our families.

So, thank you again for your knowledge and desire to make yourselves better and help your patients. When we work together, we can accomplish just about anything. Have a great holiday season, be safe and enjoy yourselves.



Benefits of Lasers

- ♦ Remove diseased tissue
- ♦ Greater access to pocket
- ♦ Less pain for the patient
- ♦ Energy acts as healing agent
- ♦ Patient appreciates up to date technology

Cont...Laser Benefits

Lasers have been around for decades, but it still seems a little like Star Wars when I use one.

I feel all hygienists should have lasers **IF**, and only **IF**, they are properly educated and trained. If not used correctly there will be big problems. I know because I have treated the results of poor laser use.

Another reason to use a laser as opposed to a scaler for access is the biologic effect that the laser energy has on the tissues. Laser energy acts as a healing agent for surrounding tissues. There is greater penetration into surrounding tissues which is a more thorough removal of diseased tissues.

Advanced laser techniques are used very effectively in

creating a sealed environment which promotes healing. The lasers energy seals the fibrin clot in place which promotes attachment gain and provides an environment for bone growth. The more advanced techniques need special training, but are very effective.

Even if you are not ready to jump on board with a laser, be familiar with them because your patients may ask about them.

Our patients are smart about new technology and pay attention. I use them almost every day for various periodontal treatments and patients appreciate how easy it is.



Outside the Office - Team Member Highlight

Trish Bo, short for a long last name she doesn't expect you to pronounce, is probably most known for visiting your offices with goodies and planning the Spring Fling Hygiene Expo and Perio Boot Camp. Spend five minutes with her and you know she likes to make people laugh and tells interesting and entertaining stories.

What you may not know is she is a bit of a sport enthusiast. Married to a high school football coach they have two

"cool" kids. Her son Grant plays football and baseball and her daughter Gabby plays basketball and Lacrosse. In Gabby's spare time she also takes ballroom dancing. When she is not watching her kids sporting events, she cheers for OU football and basketball, especially the OU women's basketball team. She knows

the coaches and really feels this could be the year they go all the way.

She is a self proclaimed reality TV junkie. A few favorites are the Amazing Race, Dancing with the Stars, American Chopper and Survivor. If she and her husband were on the Amazing Race she guarantees entertainment from the know it all Coach versus her bossy do it my way attitude.

They love to travel any chance they get and will spend Thanksgiving in Taos, New Mexico to celebrate her parent's 50th wedding anniversary. Entertaining at home and being around family and friends is a common activity. But her favorite way to relax in the evening is to have a glass of wine in the backyard by the pool with tiki torches lit and Jimmy Buffet in the back ground.



Oklahoma Center for Implants & Periodontics
3330 NW 56th St., Ste. 110
Oklahoma City, OK 73112
E-mail: Robin@OkPerioImplant.com

My mission is to give the most accurate information available about Dental Health. Unfortunately, there is a lot of misinformation out there and I would like to set the record straight. We are Committed to improving the foundation of a patient's smile.

I'd like to be able to answer your questions and perhaps share some of my observations I see on a daily basis through this newsletter or online. It doesn't have to be all business, hopefully we can have some fun too.

Check us out: www.okperioimplant.blogspot.com

Name

Address

City, State Zip



Page Six...News For You

From the Editor...

Happy Holidays everyone! Hope this holiday season brings you cheer and happiness. We increased the newsletter to a six page format to bring you more information - more news for you. Expect future publications quarterly instead of every other month. We hope to offer more information, things you want to know.

I encourage you to take advantage of Dr. Henderson as your expert in Periodontal and Implant matters. He is our biggest advocate and considers us frontline crusaders when it comes to dealing with patients' oral health. This newsletter is a means of having information you can use everyday from your local expert. Thank you for your encouraging words and thoughtful input to make it better.

Having said that, the **Spring Fling Hygiene Expo is scheduled for May 1, 2009.** Given the response earlier this year we are

looking for a larger venue to accommodate your demand. We do not want to turn anyone away.

You wanted more of Dr. Henderson at the Hygiene Expo and we plan on giving you just that. A question and answer session similar to last year is planned so be ready to ask him anything, he's ready.

Noel Kelsch is our key guest speaker. She is a cartoonist, humorist and a registered dental hygienist to boot. She has proven to be entertaining and informative and we know you will enjoy the information she will present. Check out her website www.hy-ginx.com to find out a little more about her.

If you have specific topics you would like covered in future newsletters or on the website everythingdentalhygiene.com, please don't hesitate to contact us at the office or email Dr. Henderson directly. He encourages you to ask him questions.

Have a wonderful Holiday season and we look forward to working with you next year.

