

WHO GETS PERIODONTITIS AND PERI-IMPLANTITIS

You'd think by now we'd have a solid answer to these questions. The updates to and increasing complexity of the American Academy of Periodontology's Periodontal Classification System over the years highlights our lack of complete understanding, as well as our growing knowledge base achieved through research efforts.

We do know that Periodontitis is a bacterial infection. Bacteria are necessary to cause disease, but on their own, they are insufficient. Lots of people have poor oral hygiene, but never lose bone. A susceptible host is also necessary. But we can not yet tell who the susceptible people are prior to their disease initiation. And we also know that there are multiple external factors that can worsen disease progression as well. Smoking, stress, hormonal changes, other systemic diseases such as diabetes or arthritis, and frequency of professional maintenance, all add to the mixture of the variations in how people respond to the bacterial loads in their mouths.

Now throw dental implants into that mixture. Even who will get peri-implantitis is not straight forward. Was there sub-gingival cement? Occlusal overload? Poor home care? Periodontitis susceptibility? There are people with implants with all of the above conditions which do not have any bone loss. Do we have any answers and can we make any predictions??

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THE MAGICAL DENTAL IMPLANT

Humans have dealt with tooth loss over our existence in various ways. The earliest dental replacements have been found in ancient Mayan civilizations where skulls have been discovered with pieces of jade stone or sea shells in place of teeth, some of which actually fused to the bone!

Modern dental implant technology was accidentally discovered in 1952. Per Ingvar Branemark, an orthopedic surgeon in Sweden, was performing research on the growth of the long bones of rabbits. The cameras he implanted into their leg bones were made of titanium. When he went to retrieve them for re-use, he found that they had fused to the bone and could not be removed.



Rabbit Tibia with Titanium Camera taken from Wikipedia

Dental implants were first used to replace an edentulous arch when enough bone loss over time meant the denture no longer had stability. Six to 10 smooth surface implants were inserted into the jaw, and the ones that survived served as a foundation for the new prosthesis. Today, roughened surfaces and various surface coatings allow for single tooth restorations of high predictability with 5 year survival rates as high as 97%, and integration lasting over 40 years. But this is not always the case.

This issue of ProbeTips will contrast implant health and survival between patients with and without periodontitis.

Pamela A Nicoara DDS MSD PLLC

PERIODONTOLOGY IMPLANTOLOGY ORAL MEDICINE

We're Going Digital!

The November newsletter will be the last to be mailed out through traditional US Postal Service.

This and the November newsletter will be emailed to the address we have on file for you. If you wish to receive the newsletter at a different email address, please let me know!

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PROBE TIPS

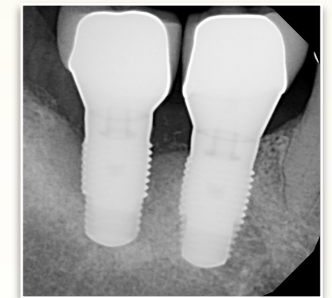
A QUARTERLY PERIODONTAL
NEWSLETTER

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Implants in Patients with Periodontitis



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Implants in Patients with Periodontitis

THE LITERATURE

A review of the literature gives us a foggy picture of the possible answers. The scientific literature can be difficult to interpret because of the varying types of study designs, and the lack of unbiased and well controlled studies.

The general expectation that can be gleaned from various systematic reviews is that patients with periodontitis **may have double the amount of bone loss and increased probing depth** around their implants compared to patients without periodontitis, although **survival rates at 5 years may be similar**. Remember, survival only means the implant is still in the mouth and functioning regardless of the amount of bone loss or disease present. Success rates are what would indicate the health of the implant.

There may be a difference between patients with various types of periodontitis such that **aggressive periodontitis patients may have more problems than chronic periodontitis patients**.

In addition, implant bone loss and probing outcomes in **chronic periodontitis patients can be similar to non-periodontitis patients particularly when regular periodontal maintenance is employed**.

PERSONAL EXPERIENCES

The best representation I know of for our lack of ability to provide patients predictable information on their implants is based on the images adjacent of a patient in my practice. She is a chronic periodontitis patient with poor oral hygiene, who does not consistently adhere to professional periodontal maintenance.

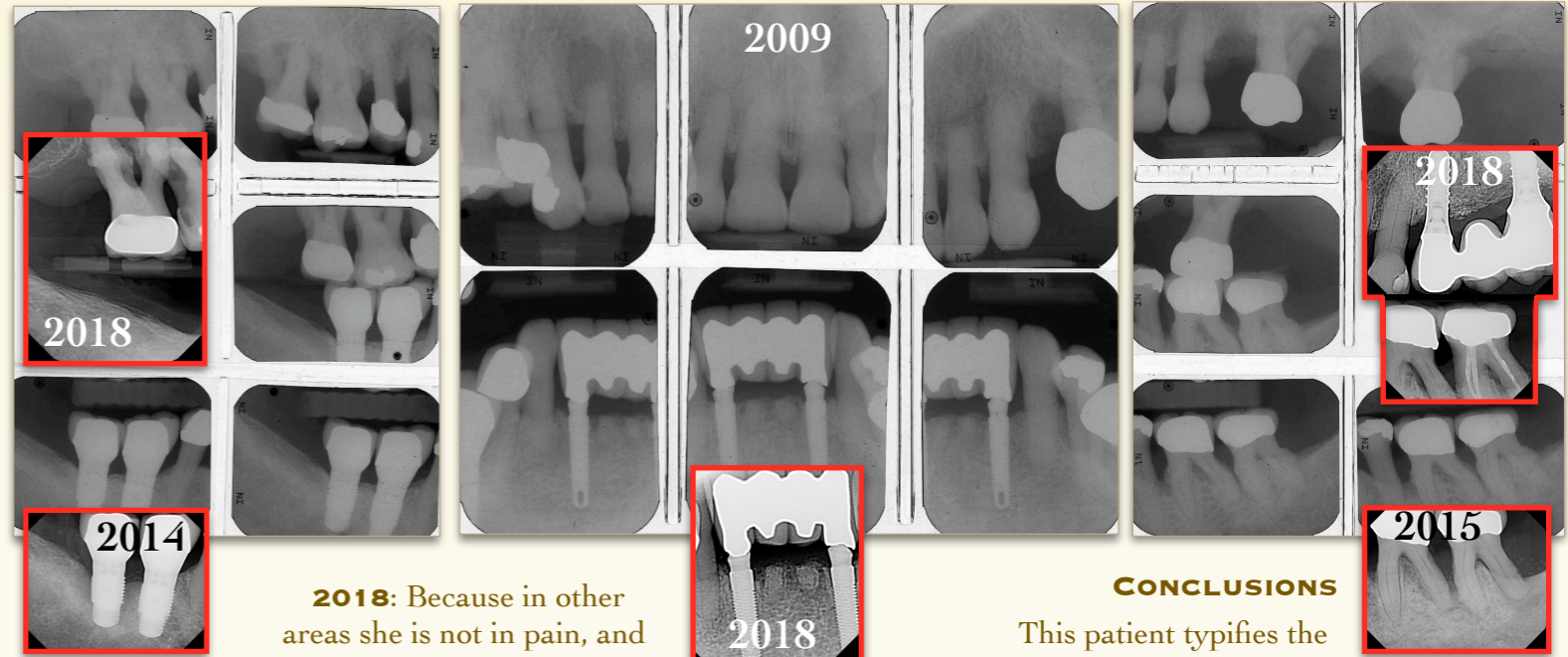
CASE REVIEW

2009: The female patient presented to my office at age 69 as seen in the radiographs adjacent. Implants were present in sites #23 and 26, and #30 and 31. The implant crowns on implants #23 and 26 are not fully seated and there is a large gap where plaque collects at the abutment crown interface. She had severe bone loss especially between and around teeth #2 and 3, 14, and 18 and 19.

2010: We treated teeth #18-19 with flap surgery and bone grafting in 2010 as mandibular molar teeth are generally more predictably treated than maxillary molars. However, when she returned for follow up for suture removal, all the sutures had been lost, the area was packed full of food, and the bone graft had been completely destroyed. Since then, I have been reticent to recommend any further surgery,

2011: Since surgery was not expected to help the teeth, and because her existing implants seemed in good condition, after losing #14, we replaced teeth #13 and 15 with implants and a new fixed bridge in 2011.

2014-15: After several years, bone loss is now evident on implant #31 radiographically, and molars in sites #18 and 19 have apical lucencies. She has resisted extractions unless teeth were class III mobile, which finally led to the loss of implants #30 and 31 last year.



2018: Because in other areas she is not in pain, and still functioning on the currently severely diseased molars which are surprisingly immobile, she does not feel she needs treatment. This may also be due to her realization that implants in her mouth are not a lifelong solution relative to their high expense, coupled by her desire to avoid and postpone removable dentures at all costs.

Although the implants in sites #12 and 14 look relatively good radiographically, implant #14 in particular has severe bone loss with 15mm probings mesio-palatally especially.

What is surprising is how well the implants in sites #23 and 26 are doing as their probings depths are within normal limits despite the open margins and her high periodontitis risk. At age 79, her risk only increases with reduced immune function over time. It will be interesting to see how implants #23 and 26 will fare.

CONCLUSIONS

This patient typifies the lack of predictability of implants in periodontitis patients in particular, let alone in periodontally healthy individuals. It seems the risk for bone loss around implants is higher in periodontitis patients, but we should not give patients in general the expectation that any implant will last their entire lifetime.

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Complete References Available on Request.

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