The Practice of Oral-Systemic Health
Working with Your Patients on Whole-Body Well-Being
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By Jamie Toop, DDS
The correlations between oral diseases and systemic conditions are now broadly accepted by both dental and medical practitioners. Seven of the 10 leading causes of death reported by the Centers for Disease Control and Prevention (CDC) can be connected to inflammation and/or bacteria in the oral cavity: heart disease, cancer, chronic lower respiratory diseases (bronchitis, emphysema, asthma), stroke, Alzheimer’s disease, diabetes, and influenza and pneumonia. Oral diseases have also been associated with a higher risk of pregnant women giving birth preterm. The primary oral conditions contributing to these connections are periodontal disease and pathogens, endodontic abscesses and cariogenic bacteria.

As dental practitioners, we can treat oral diseases and help improve patients’ health outcomes. By understanding and addressing the inflammation and infection in our patients’ mouths, we can take intentional measures to protect their overall health. There are simple ways we can educate them, implement screening protocols and tools in our practices and collaborate with local medical professionals.

Understanding the Evidence

In a landmark study published in the November 2016 issue of *Postgraduate Medical Journal* by Bale, Doneen and Vigerust, Level A evidence supports a cause-and-effect relationship between periodontal pathogens and arterial disease. High-risk bacteria present in periodontal disease are now considered a contributory cause of arteriosclerotic vascular disease, including heart attacks, strokes and more. These bacteria include: Aggregatibacter actinomycetemcomitans (Aa), Porphyromonas gingivalis (Pg), Tannerella forsythia (Tf), Treponema denticola (Td) and Fusobacterium nucleatum (Fn).

These high-risk periodontal pathogens aid in increasing the serum concentration of harmful LDLs in the bloodstream. They also aid in increasing the porosity of the lining of the arteries (endothelium) — allowing the harmful LDLs inside — and increase the ability of LDLs to remain in the endothelium and accumulate into plaques contributing to atherosclerosis. This ability of high-risk periodontal pathogens to be treated makes periodontal disease a preventable cause of heart disease.

Aa, Pg, Tf, Td and Fn directly assist in the pathogenesis of atherosclerosis, solidifying the classification from “associated” to “causal,” which is necessary to effectively manage the conditions associated with atherosclerosis. According to the study, periodontal disease is a medical condition with a dental solution and needs to be addressed and treated to lessen arteriosclerotic vascular disease risk and to treat atherosclerosis.
"Arterial inflammation due to high-risk periodontal pathogens is a potentially lethal medical problem, and the solution rests in the hands of dental providers."
—Bradley Bale, MD

Bradley Bale, MD, one of the authors of the 2016 Postgraduate Medical Journal study, says, “Collaboration between dentists who practice oral-systemic health and medical providers who understand that high-risk periodontal pathogens are causal of arterial disease is essential for heart attack and stroke prevention … Arterial inflammation due to high-risk periodontal pathogens is a potentially lethal medical problem, and the solution rests in the hands of dental providers.”

Talking with Patients
The most important step in implementing an oral-systemic health program is talking with patients about the risks involved with chronic inflammation in the mouth. Engage in a discussion about oral-systemic health with every patient, particularly those diagnosed with periodontal disease.

There are three best practices to keep in mind when having these conversations:

1. **Keep details simple and to the point.** Instead of using specific statistics when talking with patients, try framing stats in a way they can easily understand. For example, instead of saying, “Patients with gum disease are four-and-a-half times more likely to suffer from an ischemic stroke,” say, “We know infections in the mouth don’t usually stay there. They move to other parts of the body, and people with these types of infections are at an increased risk of stroke.”

2. **Say it in less than two minutes.** Our practice team has found that 90 seconds is the approximate time that most patients listen and retain information. When conducting post-exam surveys with our patients, we’ve found that if we discuss oral-systemic health for longer than 90 seconds, a patient is less likely to remember what was said. It may help to practice and time the length of your message.

3. **Be compassionate.** Make this experience as positive as possible. Many patients are already afraid to visit the dentist, so tailor your conversations to be as uplifting as possible. We want our patients to feel as if the power is in their hands, and we are giving them tools to protect themselves against the possibilities of chronic disease. Patients will be more likely to want to partner with us if we avoid saying something like, “You have periodontal disease, and people with your condition are more likely to suffer from chronic systemic diseases.” Instead, say, “The great news is that you have the power to treat this infection and help prevent chronic diseases.” When we set the correct tone and present this information in a positive way, patients are far more receptive to taking action.

Additional Testing and Screenings
The inflammation caused by periodontal disease and its associated pathogens, endodontic abscesses and cariogenic bacteria leads to a higher incidence of chronic systemic diseases. The primary mechanism is arterial tissue damage caused by chronic inflammation. With this understanding, patients diagnosed with periodontal disease should be offered a series of additional tests.

As Bale et al. report in the Postgraduate Medical Journal study, “The definition of periodontal disease must include a diagnosis of the specific underlying pathogens causing the periodontal disease.” OralDNA Labs’ MyPerioPath® is one test you can use to determine this. Studies have shown that if periodontal bacteria are treated with in-office therapy augmented by an antibiotic specific to that bacterium, protective effects from that bacterium can be seen up to two years in some patients post antibiotic therapy.

These tests provide a baseline if a sample is taken prior to in-office therapy. This allows for a follow-up test that can be taken six to eight weeks after scaling and root planing therapy (or other periodontal therapy) to assess if the therapy is working. It is also a good best practice to forward this report to the patient’s medical provider at the patient’s request.

Because patients with periodontal disease have a greater incidence of oral
Learn more about oral-systemic health

Patients with periodontal disease are:

- 24–35 percent more likely to develop plaque in coronary arteries
- 4.5 times more likely to suffer from an ischemic stroke
- 2.6 times more likely to develop Alzheimer’s disease
- 93 percent more likely to be at high risk for diabetes
- At a 62 percent increased risk for pancreatic cancer
- At an increased risk for lung infections
- At a 30–50 percent higher risk of giving birth preterm or to a baby with low birth weight

Read more about oral-systemic health in General Dentistry

The November/December 2017 issue of General Dentistry was produced in collaboration with American Family Physician, an official publication of the American Academy of Family Physicians. Look for the following articles in the special section on oral-systemic health.

**Oral manifestations of systemic disease**
Heidi L. Gaddey
Many systemic diseases can be identified based on changes within the oral cavity. This article reviews common oral cavity findings in adult and pediatric patients and the systemic diseases with which they may be associated.

**The effects of oral health on systemic health**
Shawn F. Kane
Many diseases and medications impact the oral cavity, and pathologic conditions in the mouth can have a systemic impact. Although it is unclear whether there is true causality or just an association, the consequences of such chronic conditions are well understood, and this article stresses why dentists and physicians must increase their collaboration to maximize the benefit to patients.

**Nutrition for oral health and oral manifestations of poor nutrition and unhealthy habits**
Matthew Pflipsen & Yevgeniy Zenchenko
A nutritionally deficient diet can cause or contribute to numerous pathoses of the oral cavity. Unhealthy habits can also damage the dentition. This article demonstrates how knowledge of these relationships will enable the dentist to question patients about dietary habits and provide guidance to encourage a healthy lifestyle.
Partnering with other health care providers can offer the best treatment outcomes for patients.

cancer, some dentists are recommending VELscope® screenings, which is a two- to three-minute exam done under fluorescence and can show oral mucosal abnormalities before it can be seen with the naked eye.12

Education and Partnership with Other Health Care Providers
Evidence-based medicine and dentistry support oral-systemic health, and we’ll continue to see greater collaboration between the two fields. One example is additional testing being done with the physician once patients are diagnosed with inflammatory conditions in the mouth.

The National Association of Dental Plans recently met at its 2017 Converge Conference, and one of the topics of discussion was whole-body health. Heather Kane, CEO of UnitedHealthcare Dental, and David DePorter, dental director of Pacific Resources, presented “The Evolution of Dental & Medical Care Integration.” They shared that many insurance providers are discussing how their benefits can also be integrated to “align” medical and dental care to “effectively address whole-person health.” Insurance providers are discussing increasing benefits for periodontal treatments, oral cancer screenings, looking into salivary testing for microbes contributing to periodontal disease as well as genetic testing to evaluate the patient’s response to periodontal pathogens. They are also looking at ways to educate their plan members on whole-body health.

Partnering with other health care providers can offer the best treatment outcomes for patients. To open up communication with the physician, dental practitioners can give every patient diagnosed with periodontal disease a letter addressed to his or her doctor. Staff members should keep a copy of this letter on computers throughout the office, and tailor it for each patient. Prior to giving it to the patient, the letter should be signed by the treating dentist, scanned into the patient’s chart and placed in an envelope. At check-out, office staff should give the patient the letter and instruct him or her to forward it to their primary care provider. This brings the process full circle by informing the medical provider of our findings, potential health effects and associations our mutual patient may experience.

In the event that other health care providers need more information about oral-systemic health, it is helpful to have research articles available for them, such as those published in the New England Journal of Medicine and the Journal of the American Medical Association.

Conclusion
Having conversations with patients about whole-body health, using screening tools, partnering with their medical providers and offering tools for them to track and minimize the effects of inflammation in their bodies can increase our treatment case acceptance. Patients feel empowered to have a hand in their own health care, and we give them the tools to become healthier both inside and outside of our practice. In the patient’s eye, the treatment recommendations are no longer about paying for services they think they don’t need but about us caring for their health, well-being and longevity of life. This is what can set our offices apart when patients think about returning, referring friends and family and also when medical providers need to refer patients in need of oral health care. ♦

References

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