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EVERY DENTIST’S RESPONSIBILITY

T

HE GOAL OF THE ANNUAL Washington Leadership Conference is to educate members of Congress about issues of importance to dentistry. Dentists from all over the country, representing the complete spectrum of professional interests and political positions (red state, blue state, and all the colors in between), come together to discuss these issues. The sessions tend to be very educational and sometimes very heated—it is enlightening to see how many diverse approaches exist to solve the same problems.

In past years, the important discussions were related to issues such as fluoridation, safety of amalgam, oral health education, manpower, and education. This year was different. The only topic of substance was access to care.

With the current federal administration’s focus on issues other than dental care, it is exceptionally likely that dental access programs will be hurt by the budget process. Programs such as funding for general practice residencies, the Indian Health Service, and care for children, the elderly, and people with disabilities need very strong advocates. Organized dentistry has accepted this role.

Here in Massachusetts, we have additional concerns.

There are a number of issues before our state legislature relating to access to care. One of these has been introduced by the Massachusetts Dental Society to improve the delivery of care by creating a dental workforce that relies on a full dental team approach to diagnosis and treatment, with appropriate training for, and supervision of, nondenstist personnel.

Opposing this is a proposal by the Massachusetts Dental Hygienists Association that attempts to destroy the dental team concept. This legislation would create a “public health dental hygienist” whose only qualification for certification would be one year of full-time clinical experience. This bill would also require dentists to accept Medicaid—in a manner as yet undefined—as a prerequisite of licensure.

The public health hygienist would be allowed to perform hygiene procedures, place sealants, and render “atraumatic” restorative therapy without supervision by a licensed dentist. This new class of care provider would also be eligible to be reimbursed directly by Medicaid or other third-party programs. Since the retail pharmacy chain CVS has recently announced that it is setting up “Minute Clinics” with nurse practitioners providing “basic medical care,” how long before large chains follow suit and set up dental hygiene clinics?

We as a profession must be proactive. We have to lead by example and show the public and the state legislature that we are providing the dental care that is needed. Each of us must review our positions on becoming MassHealth providers (the program has been made more user-friendly, and now we, as providers, can choose the number of patients we wish to treat).

We should also volunteer to provide services in nontraditional reduced or no-fee settings to those without the means to currently receive care in traditional settings. The MDS Foundation Mobile Access to Care (MAC) Van, as an example, is a very public, high-profile way to show that the profession cares about providing services to children in need. Lawmakers must see us working to solve the problems that exist, or we will be forced to work under their regulations.

It bears repeating: We, as members of a caring profession, have to be proactive. The operative word is “caring.” Do not assume that others will solve the problem for you. Think compassionately and act boldly. Your professional future is in your hands.
One of the referral services the Massachusetts Dental Society provides to the public is the names of member dentists who will make housecalls, the Home Visit Referral Service. Unfortunately, the list of dentists who provide housecall visits is extremely short. I am contacted frequently by the families of nonambulatory patients needing dental care who have obtained my name from the MDS. I attempt to see as many of these patients who reside in my general area as possible. However, the limitations of my availability and the impractical distances that many of these patients live from my area leave a great number of needy patients without any options for receiving dental care. It is my wish to see more dentists partake in this much-neglected segment of dentistry.

Housecall dentistry includes visits to people’s homes, assisted-living facilities, nursing homes, hospitals, and similar sites. At times, I have even performed some simple services for patients while they sat in their cars in the parking lot behind my office. The services I have performed run the spectrum from minor denture adjustments to crown fabrication. There are some patients whom I have been visiting regularly for many years; some patients I visit only once. The variety of services one can provide during housecalls is determined by the dentist’s comfort level and the portable equipment he or she has available to work with.

I have found patients and their family members whom I have treated during housecalls to be extremely appreciative of my efforts. Recently, I had the honor of visiting a college professor who was in hospice care at his home. He was afflicted with metastatic cancer. Despite the horrendous medical challenges he was dealing with, his only complaint was the inability to eat due to a jagged edge associated with a fractured tooth. I simply covered the jagged edge of his tooth with a glass ionomer material and he instantly felt better. After his death, his daughter called me and tearfully expressed her thanks for my making her father comfortable during his final days.

Decades ago, it was common practice for the family physician to visit patients at their homes when they were too ill to leave their beds. When we reflect on this old practice, we lament that there are no longer many doctors with that type of dedication to their patients. I suggest that dentists can obtain that level of respect from the public by making greater efforts to help patients outside our offices. This is particularly relevant at a time when our profession is viewed as being more concerned with financial gain than satisfying the needs of our patients.

Housecall dentistry is challenging. In the absence of the normal fixed office equipment, housecall dentists must be creative and flexible.

Anything at all that we can do for these nonambulatory patients is beneficial. I urge more dentists to contact the MDS and offer their names to be included in the Home Visit Referral Service. The rewards of providing such service will greatly surpass the efforts required to administer it.

Respectfully submitted,
Keith Asarkof, DMD
Lexington

Editor’s Response: The Massachusetts Dental Society Home Visit Referral Service currently has 33 MDS members. If you would like to join the Housecall Referral list, contact Andrea Dotterer at the MDS at (800) 342-8747, ext. 271, or email adotterer@massdental.org.

Contact Us
Have a comment about a specific article or the Journal in general? Send your Letters to the Editor to Melissa Carman, Managing Editor, Two Willow Street, Suite 200, Southborough MA 01745, fax (508) 480-0002, or email mcarman@massdental.org.
LIQUIDATING THE family business in order to pay estate taxes is often a grim reality for families of individuals who die without wills or estate plans. If you own a family business, you need to take steps now to help ensure that one of your most valuable assets will still be around for your children, grandchildren, and beyond.

The Facts on Family-Owned Businesses

The terms “family business” and “small business” can be misleading, especially when you consider the impact these businesses have on the U.S. economy. Of all small companies in the United States employing fewer than 500 people, 89 percent are owned by families. According to 2007 statistics from the Family Business Institute, 24.2 million family-owned U.S. businesses employ 82 million people, or 62 percent of the U.S. workforce.

It’s natural to assume that many business owners would like to keep this kind of influence in their families. However, in reality, the situation is much different: Only a fraction of business owners who want their family business to remain in the family actually take steps to plan a formal succession, according to the Boston-based Family Firm Institute.

Why do so many business owners fail to act on their intentions? Because business continuation is often a difficult subject for family business owners to broach. In many cases, the subject of succession is avoided rather than approached. It is often a taboo topic.

Business owners may be reluctant to hand over something they spent much of their lives building. They may be forced to confront and resolve sibling rivalry and other unpleasant family disagreements. Sometimes owners will have greater difficulty grooming a family member for succession because of the overlap of family and business boundaries. Additionally, if the owners plan to rely on the family business for retirement income, they may worry about the business’s success under new owners.

But the costs of not planning for the continuation of family businesses may be enormous. Often, companies without formal succession plans are courting disaster. Statistics reported by the Family Firm Institute show the following trends:

- More than 33 percent of family businesses survive into the second generation.
- Around 12 percent of family businesses are viable into the third generation.
- Only 3 percent of all family businesses operate into the fourth generation and beyond.

Survival Planning for Your Family Business

How can you make sure that your business avoids becoming one of these statistics? A sound solution is to establish an estate plan. Simply put, you need to do the following:

- Develop a formal management succession strategy and ensure that your business stays in the family after your death.
- Equalize your estate so that if you have children, you can make alternative bequests to those who do not want to be involved with the family business. At the same time, you can leave the business to the children who do.
- Guarantee that the business continues in an orderly manner after your death.
- Create a buy-sell agreement for family and nonfamily members who may own stock in your business.

As you can see, ensuring that your business lives on is a complicated issue that engenders many concerns, and care must be taken to make certain that all issues will receive open and honest discussion.

With the right estate planning team and the right succession plan in place, you can go against the statistics to maintain your company’s success and guarantee your family’s ownership for future generations.
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HEALTH CARE REFORM—
IT’S ALL ABOUT ACCOUNTABILITY

I was speaking to members of a dental office recently, and they told me that they have three employees who declined to take the office’s health insurance because it was “too expensive” and they have 10 employees who are ineligible because they work less than the 35 hours required for eligibility in their office. The dentist asked me: “I don’t have to concern myself in terms of Health Care Reform with these 13 employees, do I?”

In the past, I would have provided counsel to the dentist that since the 10 employees were ineligible and the three employees didn’t want the insurance, the office would be okay. However, with the Massachusetts Health Care Reform Law, all Massachusetts residents need to have health insurance as of July 1, 2007. Using the above-mentioned case as an example, what does this dental office need to do to comply?

Simply put, businesses have to account for all of their employees. What this means is that each business needs to know, in writing, what each employee is doing for his or her own health insurance. The reason for the Health Care Reform mandate is to have all residents enrolled in a health insurance plan. Previously, people who were uninsured knew that they had a safety net: the uninsured pool, which would cover them if they needed care. Therefore, many people, an estimated 380,000 Massachusetts residents, decided not to get insurance. In the event the uninsured got sick or injured, they went to the hospitals, which are mandated to provide care to all people, and this care would be covered under the state’s uncompensated care pool.

So, in effect, those with health insurance, carriers, and hospitals have been funding the care of these uninsured people. The cost of care at hospitals is very expensive. If an uninsured person went to the hospital with a sore throat or a headache, the cost to treat this condition was far more expensive than treatment at a doctor’s office or clinic.

So Health Care Reform is here. What must a dental office do? First off, take an accounting of all of your employees. You will have four categories:
Category 1—Eligible insured. Meet office eligibility requirement and are enrolled in office group health insurance plan.
Category 2—Eligible spousal waiver. Meet office eligibility requirement but waive off the plan because they are covered by their spouse’s plan.
Category 3—Eligible not insured. Meet office eligibility requirement but choose not to get office group health insurance plan for a variety of reasons. This group is considered uninsured.
Category 4—Ineligible. Do not qualify under the office eligibility requirement; either get insurance on their own, are covered by their spouse’s plan, or are uninsured.

Regardless of the size of your business, it is imperative that you identify which of the four categories your employees fall into. If they fall into Categories 3 or 4, be aware that the rules have changed. The employee/dental office can do the following, based on the category:

Category 3 employees can either enroll in the group health plan offered through the office and subsidized by the office or get insurance through the insurance connector offered by agents such as MDS Insurance Services, Inc. (MDSIS). They will be required to utilize the Section 125 Plan to help pay for the insurance. Note that if enrolled under the dental office’s health insurance plan, the employer, based on the terms set forth by the business, may subsidize some of the cost. If the employees obtain insurance through the connector, they must pay the entire premium themselves.

Category 4, uninsured employees, can get insurance directly through an insurance agent or the connector that fits their individual needs. They will not be eligible for subsidized insurance through the business, but depending on their income level, they may be able to receive subsidized insurance premiums through the connector or, if not eligible for subsidized insurance, can enroll in an individual connector insurance product offered by agents such as MDSIS.

As you can see by the information outlined above, you must be precise in the management of your health insurance benefits. It means that you have to account for all of your employees, from those who work one hour to those who work 50 hours a week. To do so will require a small investment in time and management, but the payoff is that you will document your office structure. Failure to do so can result in fines.

With the Health Care Reform Law, it is all about accountability. My recommendation is to get on it immediately. If you need help, contact MDSIS at (800) 821-6033.
A RESTORATION REVOLUTION

Dr. Feuerstein is technology editor of Dental Economics and a general practitioner in North Billerica. He can be contacted by emailing drpaul@toothfairy.com or by visiting www.computersindentistry.com.

The American Revolution officially began in the town of Lexington, MA, in 1775. A dental revolution is now occurring in the same town, where Brontes Technologies has quietly been working for more than three years on a digital scanner—resembling an intraoral camera—which will soon replace impression trays and impression materials. Thoughts of this technology conjure up visions of CEREC, which has been around for 20 years, but this revolution comes with a difference in both technology and workflow.

CEREC, which was completely redesigned this year, uses a camera that takes static pictures of teeth; these pictures are reconstructed by software to make 3-D virtual models. The software then designs a restoration on the computer screen and sends that image to a small milling machine in the office. The latest software has taken away a lot of the confusing design tools and completes the restoration in minutes. This allows the practitioner to fabricate a finished restoration at the same visit the tooth has been prepared, eliminating temporaries and a second visit. Currently, the restorations are limited to single units, although multiple units can be made in a quadrant at the same time. Sirona has hinted at three-unit bridges as larger blocks become available, since the new milling chamber (MC XL) can handle these.

CEREC’s 20 years of clinical studies and success have proven that the process does work, provided the practitioner follows good preparation designs and specific technical rules. This process, however, is not for every restoration. Although the materials are stronger than stacked porcelain or pressed ceramics, they may not be durable enough for the requirements of some practitioners. Nevertheless, according to Sirona, the 10-year success rate for inlays averages between 93 percent and 95.5 percent, and over seven years, the rate is 97 percent for premolars and 94.4 percent for molar full crowns. Still, despite the ease of use and single-visit restorations, many practitioners are looking for another high-tech alternative.

A few new companies have taken the front end of the CEREC idea and found a method of acquiring a digital impression that will allow traditional lab work to fabricate crowns and bridges. Brontes Technologies and New Jersey-based Cadent are the first to explore this idea in the dental world. These companies use an intraoral “wand” that creates a 3-D image similar to that of CEREC. The difference is that an actual model can be fabricated from these scans and then sent to your favorite dental lab. However, this oversimplification deserves a bit of clarification.

The main distinction from CEREC is that these systems create a physical model and use dental laboratories to fabricate the restorations. Some restorations can be constructed traditionally while others can use CAD/CAM machines, which are quite large, slow, and costly and are not designed to be placed in a traditional dental office, and thus are not an alternative to the one-visit, in-office CEREC restorations.

Brontes has spent its energies on perfecting and simplifying the digital impression/acquisition process so that digital quadrants and full arches can become a reality. The digital file can be sent to machines that can fabricate actual models that dentists and labs are quite familiar with. These “model-making machines” are actually 3-D printers that work similarly in concept to a laser printer—instead of black toner, plastic powder or liquid is layered and fused together by lightening-fast, computer-controlled lasers. The software can actually mark margins, ditch dies, and construct sectioned models that fit together accurately, more like a jigsaw puzzle and surely tighter than die cuts made with a saw blade.

At this point, a dental lab can use methods ranging from traditional waxups to CAD/CAM copings such as Lava, Procera, Everest, Cercon, and the like. These copings can be milled out of blocks of ceramic or titanium, and since they are presintered or precast, they are stronger than the traditional copings that practitioners have been using. Also, since the model is digital and the fabrication is digital, the castings should be highly accurate. That is a bold statement, but any laboratory technician will report that the quality of the traditional, day-to-day impressions received contain many of questionable accuracy—the digital impressions are simply correct. The ultimate will be going directly from the digital scan to the CAD/CAM coping with no model in between to be scanned.

Cadent has already begun selling its product this year and Brontes is in final testing. Brontes, which was founded by a couple of mechanical engineers from the Massachusetts Institute of Technology who realized they could use a stereo video camera to create 3-D images, was acquired by 3M ESPE in October. The acquisition positions the small Lexington start-up as a major force in dentistry.
Despite the inclement weather, the MDS Foundation’s 6th Annual Golf Tournament at Willowbend Country Club in Mashpee was the most successful fundraiser yet, raising nearly $53,000 for the Foundation. This year’s outing also included the first-ever Spa Day, where 12 participants engaged in activities such as massage, Pilates, and a golf or personal training lesson. Initiated by the Women’s Leadership Task Force, the Spa Day was an opportunity for women dentists and nongolfers to become more involved with the Society’s fundraising programs.

Golfers had several opportunities to win prizes during the tournament. James McDonough, son of Jim McDonough, DDS, of Wollaston, sunk a 20-foot putt to win the Putting Contest, sponsored by the Middlesex District Dental Society. Trans-Atlantic Motors in Hyannis sponsored the Hole-in-One Contest featuring a chance to win a 2007 Volvo S80. Janice Spada, DMD, won the Longest Drive Contest, while Ted Lee, DMD, Dennis O’Toole of Carlin, Charron & Rosen, George Gorser of MDS Insurance Services, and Nick Mozzicato of Solmetex won the Closest to the Pin Contests.

After the tournament, a live and silent auction, which began online a month before the event, was led by Richard LoGuercio, DDS, chair of the MDS Foundation Board, and Andrea Richman, DMD, MDS president. Attendees were able to bid on Red Sox tickets, rounds of golf at exclusive clubs, Boston Bruins luxury box seats, hotel stays, sports memorabilia, and more.

The tournament would not have been a success without the help of the MDS Foundation Golf Committee and its chair, Michael Seidman, DDS. A special thank-you to the event’s major sponsors: Gentle Dental Associates and MDS Insurance Services. In addition, the following District Dental Societies generously contributed to the Tournament:

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All proceeds benefit the MDS Foundation, which is dedicated to improving access to dental care for the underserved and enhancing educational opportunities for those who wish to pursue a dental career. The Foundation most recently launched the Mobile Access to Care (MAC) Van program, which provides free dental treatment to needy children under the age of 18 throughout Massachusetts and a referral system that helps these children find a “dental home” for any treatment they need after the MAC Van leaves the area.

**Tournament Winners**

**Best Ball of Four: 1st Place Gross**
Michael Seidman, DDS, Daniel Varallo, DMD, Michael Anastasi, and Fred Jewett

**Best Ball of Four: 2nd Place Gross**
John Caravolas, DDS, Efrain Ruiz, DMD, Donald Burgoyne, DDS, and Wayne Fick

**Best Ball of Four: 1st Place Net**
Greg Clark, Andrew Lavigne, Gary Cowan, and Brian Macaluso, of Boston Park Plaza Hotel

**Best Ball of Four: 2nd Place Net**
Martin Katz, DMD, John Lasker Jr., DMD, Francis Shea, DMD, and James Showstack, DDS

**Best Ball of Four: 3rd Place Net**
Jeffrey Slone, DDS, David Wolf, DDS, Chris Choate, and George Gorser of MDS Insurance Services

**Scramble: 1st Place**
James Masterson of Align Tech, Lou Donato, Christian Villaroel, and Tony Crovo of Nobel Biocare

**MDS Foundation 4th Annual Wine Tasting**
Friday, October 26, 2007 • The Lighthouse of the Seaport Hotel
Register at www.mdsfoundation.org/events

**Save the Date!**

Vol. 56/No. 2 Summer 2007
The 143rd Massachusetts Dental Society House of Delegates Annual Session was held on May 11, 2007, at the Westin Waterfront in Boston, right next door to the Boston Convention and Exhibition Center, new home of Yankee Dental Congress. Andrea Richman, DMD, was inducted as MDS president, succeeding Alan S. Gold, DDS.

Other officers elected and taking the oath of office for the 2007–2008 term were: Milton A. Glicksman, DMD, president-elect; David S. Samuels, DMD, vice president; Charles L. Silvius, DDS, secretary; Anthony N. Giamberardino, DMD, assistant secretary; Charles A. Gagne, DDS, treasurer; and David A. Schmid, DDS, assistant treasurer. Additionally, Thomas P. Torrisi, DDS, was inducted as Speaker of the House, replacing James B. Nesti, DMD, who stepped down from that position. Two new trustees were also inducted: Lisa Vouras, DMD, was elected trustee of the East Middlesex District, replacing Dr. Giamberardino; and Howard M. Zolot, DMD, was elected trustee of the Merrimack Valley District, replacing Dr. Samuels. There were also four new Guest Board Members elected: Kelly M. Bouchard, DMD; Sandra J. Crowley-Le, DMD; Mary Jane Hanlon-Rogers, DMD; and Justine Tompkins, DMD.

At the House session, the delegates approved eight resolutions, including one encouraging all MDS members to join the MassHealth dental program. Jetta Bernier, executive director of Massachusetts Citizens for Children, received the 2006 Allard Award, which the Council on Access, Prevention, and Interprofessional Relations (CAPIR) bestows on an individual who heightens awareness of abuse and neglect, as well as issues relating to domestic violence.
Fifty-Year Member Practitioners

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LIKE THE SUN RISING, A SOLUTION TO THE ACCESS-TO-CARE problem in Massachusetts is on the horizon. The state legislature and media are starting to see the issue more clearly than ever. Doral Dental USA has been hired not just to serve as the third-party administrator for MassHealth in the state, but also to manage some of the problems and issues that have kept providers from joining MassHealth. The Commonwealth has increased the fees for procedures performed on children, and a coalition of concerned parties, including the Massachusetts Dental Society, is advocating for increased fees for adult care. Most importantly, regulations have been eased to allow for providers to customize a program to fit MassHealth into their practice. We must not allow this opportunity to pass without action.

Launched earlier this year, the MDS Foundation Mobile Access to Care (MAC) Van has been doing an admirable job of raising awareness of the access issue and helping hundreds of children who otherwise would not have received treatment, but it is not the sole solution to the access problem. Related volunteer efforts provide some care to needy children as well, but these really are just making a dent. Doral is also not the solution to the problem, but enrolling in Doral is the start to helping us find a solution. Doral has shown me, as an existing participant, that it has a remarkable understanding of the access-to-care issue as well as the knowledge and ability to deal with the logistics, paperwork, and patient-related issues that in the past were the demons that chased providers away.

The solution to the access-to-care problem lies with us, the dentists. We, as health care professionals, need to take a long, hard look inward. We have both a moral obligation and a social responsibility. Pause and think about it. The access problem is our problem. We need to act. I don’t think it is a question of whether or not to be a MassHealth provider. The solution to the problem is here if we all register as providers.

The limitations of the MassHealth program of yesterday are what may be keeping some members from signing up as providers today. But customizing participation to meet practice goals and control financial impact is now possible with the new regulations and with Doral’s help. Specifically, you can take as many or as few patients as you’d like. This is the key to the solution of the access problem. By understanding this, we all can be comfortable signing up and staying in the program for the long run.

But if you have refrained from becoming a provider until now, it is crucial that you avoid those demons from years past. Understanding how to get started treating MassHealth patients without getting swamped in a quagmire of phone calls and red tape is essential. For starters, let Doral come into your office to assist you with the paperwork, walk you through the system, teach your staff how to use the Web site, and explain to them the provider manual. Let Doral set up a provider profile for you.

When other providers were dropping out years ago, I customized my approach to the MassHealth program. Now, years later, I’m finding that what I have been doing is actually “the new MassHealth.” Consider these suggestions when developing your initial plan to join MassHealth:

- Determine how many patients you are willing to see. Once you have signed up, you have the option to open and close your panel at any time. It is very easy and almost instantaneous to open and close your panel. You can also change the number of patients you are willing to treat at any time. It is all up to you.
- Set your profile on the Doral Web site to cover your zip code and maybe one or two adjacent zip codes.
- Don’t start seeing patients without reading the manual from Doral and understanding coverage. Contact Doral if you have any questions or if something isn’t clear.
- The prior authorization paperwork is still a headache, but Doral is working on it. Avoid it whenever possible.
- See triaged patients, at least to start, to help you get your feet wet. Triaged patients can come from the MAC Van, the senior citizen coordinators in your community, community-based programs, the Special Olympics Special Smiles program, special needs resource people, and Doral coordinators. Doing this helps you avoid the cold phone calls that come from an open panel while you learn to navigate the system.
- Adopt a “take-five program,” where you agree to see five children and/or families to start. When those five kids or families are treated and moved to your recall system, then take five more and keep going until you want to stop. General dentists can treat five kids and get them on the recall system in the same amount of time as treating one adult who needs some kind of prosthetic care.
- Specialists can customize their programs by signing up with a closed panel and then sending a letter to their referring general dentists, informing them that they are willing to be a provider for triaged MassHealth patients from them.

Customization, triage, and Doral are all key to your successfully and seamlessly incorporating MassHealth into your practice. A little success of this kind in all our practices will help solve the access-to-care problem. And little by little, we’ll start to make that dent a little bit bigger.
EBI Consulting has been the MDS’s recommended carrier for dental office waste pick-up and disposal since 2002. The endorsement from the MDS came after a thorough review by the MDS and an extensive regulatory review process conducted by an independent company. The MDS program with EBI allows members, with just one call, to properly dispose of fixer, developer, lead aprons, fluorescent bulbs, scrap amalgam, used amalgam separator filters/cartridges, as well as hydraulic fluids and other materials generated during office renovations/relocations. Members are not required to sign long-term contracts and special pricing has been negotiated by the MDS on behalf of members. For information or to schedule a service call, contact EBI at (800) 786-2346, ext. 1835.

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Scleroderma and Dentistry: Every Dentist Is a Scleroderma Specialist

Background
As a speaker for the National Scleroderma Foundation, I meet and correspond with many of its members, people who live and struggle with scleroderma daily. Some relate a common story. They suffer with an unknown malady for months or years. Finally, a physician makes the diagnosis of scleroderma. At the patient’s next dental appointment, he or she alerts the dentist to this new diagnosis. Some dentists say that they do not know how to treat patients who have scleroderma. The dentist instructs the patient to find another dentist who specializes in the care of patients with such diseases. Unfortunately, patients may have difficulty finding such a dentist.

The real tragedy of this situation is that all of these patients’ dentists are oral health specialists competent to care for the dental needs of patients with scleroderma. By turning patients away, these dentists are creating barriers to care that need not exist.

Epidemiology
Scleroderma is an autoimmune, rheumatoid factor-positive disease that may be localized or systemic, affecting the skin, lungs, kidneys, and cardiovascular system. Dental effects include xerostomia, microstomia, idiopathic resorption of tooth and bone, oral effects of medications, erosion and decay caused by gastroesophageal reflux disease (GERD), and poor oral hygiene due to physical and emotional effects of the disease. All dentists have the knowledge and ability to treat those suffering with scleroderma.

Scleroderma is an autoimmune disease with a high positive rheumatoid factor. Other rheumatoid diseases include lupus erythematosus and rheumatoid arthritis. Epidemiologists estimate that scleroderma affects about 300,000 Americans. According to National Scleroderma Foundation statistics, 80,000 to 100,000 have systemic sclerosis, while 200,000 to 220,000 have localized disease. Scleroderma is more common among women, African Americans, and the 25- to 55-year-old age group.

Localized scleroderma is more common and less severe. The survival rate for those with the localized disease is much better than for those with systemic sclerosis. Localized scleroderma includes CREST syndrome, morphea, and linear scleroderma. CREST is an acronym for the clinical components of the syndrome: Calcinosis (dermal calcium deposits), Raynaud’s phenomenon (an arteriole contraction condition that causes peripheral blood supply to diminish with exposure to cold), Esophageal dysmotility (loss of pliability in the esophagus), Sclerodactyly (hardening and tightening of the skin of the fingers and toes), and Telangiectasia (collection of dilated blood vessels).

Abstract
Scleroderma is an autoimmune, rheumatoid factor-positive disease that may be localized or systemic, affecting the skin, lungs, kidneys, and cardiovascular system. Dental effects include xerostomia, microstomia, idiopathic resorption of tooth and bone, oral effects of medications, erosion and decay caused by gastroesophageal reflux disease (GERD), and poor oral hygiene due to physical and emotional effects of the disease. All dentists have the knowledge and ability to treat those suffering with scleroderma.

DAVID M. LEADER, DMD
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Journal of the Massachusetts Dental Society
Raynaud’s phenomenon affects 95 percent of those with systemic sclerosis. Conversely, only a small percentage of those with Raynaud’s phenomenon have scleroderma. Characteristically, fingers and toes will become painful and change color upon exposure to cold. There may be a biphasic (normal to white and back to normal) or triphasic (normal to white to blue and back to normal) color change. The triphasic change is characteristic of more serious disease.2 Daniel Furst, MD, a rheumatologist and member of the National Scleroderma Foundation’s Medical Advisory Board, reports that Raynaud’s phenomenon affects the lungs by tightening blood vessels. The effect of Raynaud’s phenomenon on the lungs can be serious and irreversible. Patients with Raynaud’s phenomenon should be evaluated by their physicians and treated early. If patients delay treatment until their respiratory symptoms start to become noticeable, the opportunity for successful management is lost.3

Gastrointestinal effects of scleroderma are very common, affecting 75 percent to 90 percent of those with systemic sclerosis.4 Esophageal dysmotility is likely to cause GERD. Dentists may be the first to diagnose GERD in their patients, particularly if the dentition exhibits significant erosion. If suspecting GERD, question the patient about his or her current gastrointestinal condition. When evaluating a patient with erosion, keep the following description of the symptoms of GERD in mind.

The acid, while tracking back into the food pipe, can sometimes irritate vocal cords and go into the lungs, causing hoarse voice and symptoms of asthma (wheezing and shortness of breath). Some clinical studies have even suggested that the acid going into the lungs may cause lung inflammation in scleroderma. In addition, weakening of the esophageal muscles themselves results in less efficient "milking" of the food down the esophagus, and at times, food can even get temporarily stuck in the esophagus and patients may need to vomit to clear the esophagus. Reflux can also cause symptoms of choking, chest pain, difficulty swallowing, and acid taste in the mouth.5

In scleroderma, telangiectasias, which are collections of enlarged superficial blood vessels, characteristically occur on the face, upper trunk, and hands. Telangiectasias may occur intraorally and may cause bleeding.

Morphea is a localized patch of scleroderma that may not spread or foreshadow a more generalized disease.6 Morphea sometimes goes undiagnosed and often does not require treatment. Linear scleroderma appears like a deepening scar or furrow that may appear to be a knife wound. There is a special name for linear scleroderma of the forehead, coupe de sabre (literally "strike of the sword"). Linear scleroderma may become quite disfiguring. Fortunately, microsurgical techniques are available to return much of the patient’s healthy appearance.7

Systemic sclerosis affects skin, lungs, the cardiovascular system, the genitourinary system, and the gastrointestinal tract. While scleroderma’s effect on the skin is pathognomonic, it is scleroderma’s effect on the lungs and the kidneys that usually proves fatal. Patients with systemic sclerosis live in constant discomfort due to the many effects of their disease.

Dental Effects of Scleroderma

Orofacial effects of scleroderma include xerostomia, microstomia, myofacial dysfunction, idiopathic resorption of tooth and bone, oral effects of medications, loss of self-cleansing ability of the oral musculature, oral erosion and decay due to GERD, and impaired oral hygiene due to depression and loss of manual dexterity.

Xerostomia

About 70 percent of patients with scleroderma have xerostomia.1 Drying may be due to patients’ inability to close their lips together, causing constant mouth breathing. There may be concomitant Sjögren’s syndrome (drying of all exocrine glands, primarily lacrimal and salivary glands) often seen with rheumatoid factor diseases. Additionally, more than 400 common medications cause xerostomia as a side effect, including many medications taken to treat scleroderma and its symptoms.

Xerostomia allows the patient’s level of oral flora to rise. Patients with xerostomia have an increased risk of tooth decay and oral infections, especially candidiasis. Denture wearers are more prone to irritation and denture stomatitis (due to a chronic erythematous form of candidiasis) when they have xerostomia. When can-
tongue blades. Make a stack of tongue blades that supports the incisors when the mouth is open as far as possible. Then, tie the blades together with a rubber band. Now, slide another blade or two into the stack. The increase in the girth of the stack will hold the incisors a millimeter or two farther apart. Leave the thicker stack in place for several minutes. In a few days, the patient will find that he or she has effectively increased the diameter of his or her orifice—and hence comfort level.

Dentists should use every technique available to increase their patients’ comfort during treatment. Use a rubber dam when possible. Use small-head handpieces and pedo-length burs. Shorten regular-length burs. Use the smallest-size impression trays, and cut down the sides of the impression trays when necessary.

Myofacial Dysfunction

Tightening of the facial skin, fascias, and musculature may cause myofacial pain syndrome or temporomandibular joint dysfunction. In addition to the usual treatment (restoring occlusion with prosthetics and bite planes, medication, rest, and biofeedback), physical therapy is helpful to improve skin resilience and joint mobility.

Idiopathic Resorption

Idiopathic tooth resorption is an uncommon condition that causes tooth loss by autoimmune resorption of tooth substance internally or externally. There are not many studies relating idiopathic resorption to scleroderma. However, when large groups of scleroderma patients gather, there are usually a few with a history of this problem. Scleroderma patients should have more frequent radiographic surveys to look for effects of idiopathic resorption and xerostomia.

Tooth resorption should be treated early. The condition may progress rapidly and may affect one tooth or many. Resorption may continue after operative or endodontic treatment. Some dentists will not provide major treatments to teeth in this condition.

Many scleroderma patients will exhibit resorption of the angle of the mandible. This does not appear to cause symptoms. Its etiopathogenesis is not understood, but may be due to increased pressure from fibrosis.

A stack of tongue blades secured with a rubber band can be a helpful tool in treating patients exhibiting microstomia.

Oral Effects of Medications

Physicians prescribe several medications to treat the symptoms of scleroderma. Many of these medications have oral health effects. Because treatment regimens can change frequently, ask your patients to update their medication lists regularly. Dentists should be aware of patients’ medications and their oral health effects. Help the patient by prescribing symptomatic relief and by advising the medical doctor of any problems that may affect the patient’s quality of life or health.

For example, physicians may prescribe cyclosporine or D-penicillamine to treat skin fibrosis. Stomatitis is a common side effect. The dentist should treat this symptom. If stomatitis seems to be causing the patient to lose excessive weight, the patient should consult with his or her physician regarding the seriousness of this side effect.

Calcium channel blockers such as nifedipine (Procardia) and amiodipine (Norvasc) relax blood vessels and are a common treatment for Raynaud’s phenomenon. Gingival hyperplasia may result from their use. This is an example of a side effect that is relatively easy to treat even though it can be a nuisance. Attempt to control hyperplasia with excellent home care and frequent professional prophylaxis. Perform a gingivectomy as necessary.

Patients may approach their dentist with concerns about change in taste sensation. Dysgeusia or taste change may result from their use. This is an example of a side effect that is relatively easy to treat even though it can be a nuisance. Attempt to control hyperplasia with excellent home care and frequent professional prophylaxis. Perform a gingivectomy as necessary.

GERD

Another common effect of scleroderma is GERD, which may cause enamel erosion and may increase the patient’s rate of tooth decay. Often, dentists are the first to diagnose GERD. Confirm the diagnosis by asking the patient relevant history questions: Do you have frequent heartburn? Chest pain? Sinusitis? Hoarseness? Do you wake with a sore throat, but feel well otherwise? Do you wake with a sour taste? The combination of positive physical signs (dental disease) and affirmative answers to any of the above questions warrants referral to the patient’s physician for confirmation and treatment. One side effect of GERD, Barrett’s esophagitis, may lead to esophageal cancer. Treatment will prevent this life-threatening condition. Treatment for GERD is symptomatic and includes nutritional counseling and acid-reducing medication.

Psychological Effects of Scleroderma

Scleroderma is a chronic illness that affects well-being and shortens the life span. The inexorable progression of the disease demoralizes patients. There are unique aspects of scleroderma that lower self-image. People with scleroderma speak of how their appearance in the mirror no longer matches their mental self-image. Tightening lips drawn over teeth do not approximate, robbing them of the ability to kiss, thus depriving them of the ability to show affection for their loved ones. Their face may become less pliable or flexible, even masklike or wooden, robbing them of their facial expressiveness.
Depression is a hallmark of scleroderma. In the face of depression, many patients will ignore their oral health until they reach a crisis. This lack of attentiveness thus causes a spiral of increasing poor oral health, self-image, and depression.10

Dental Treatment

In the Office

Often, people suffer with symptoms of scleroderma for years before they receive a diagnosis. Additionally, other diseases and conditions have signs and symptoms in common with scleroderma. All patients benefit from patience, understanding, and a thorough knowledge of their condition. Begin by taking a complete medical history. Allow time for discussion of the information on the history form, and review questions that require additional insight.

Be sensitive to the patients’ comfort. Front desk staff may remind patients who have Raynaud’s disease that dental offices tend to be cool, so these patients might want to bring gloves and a blanket. Dental offices could also have a throw or quilt available for temperature-regulation and wear may proceed normally.

Teach patients who have microstomia to use physical therapy to increase their maximum opening. Allow them time to do their exercises in the office immediately before their treatment. Use shorter burs—either pediatric-size burs—or shorten the shanks of longer burs. Use a mouth prop and a rubber dam. If premedicating with a muscle relaxant, be sure to obtain informed consent at an earlier time.

When treating patients with scleroderma, the most important tools you can use are sensitivity, patience, and ingenuity.

Impressions are more difficult to obtain when the patient has microstomia. Use the smallest tray that fits or a custom tray. Lubricate the sides of the tray.

Resilient denture bases may be important for some patients with microstomia. The resilient base allows the patient to squeeze the sides of the denture together during insertion. Many patients with microstomia respond so well to physical therapy that denture fabrication and wear may proceed normally.

Home Care

Excellent home care is essential for patients with scleroderma. Loss of dexterity and depression are factors that limit the patients’ ability to care for themselves. Introduce patients to oral care products that are appropriate for their condition. While it is possible for dentists and hygienists to customize toothbrushes to aid patients who have lost dexterity due to arthritis or sclerodactyly, there are many prefabricated adaptive toothbrushes available. The Dex-T-Brush is a very inexpensive manual brush with a wide flat handle that is easy to grasp from various angles. The Benefit Plus is another inexpensive manual brush with a fat handle and bristles arranged to brush all surfaces of the teeth at once. Electric toothbrushes are another good recommendation for patients with limited grasping ability and loss of dexterity. The fat, round handles and automated motion will help many patients regain the ability to care for themselves.

Interdental cleaning by hand with floss may not be possible for many scleroderma patients. Floss forks are a common adaptation. Reach Access Flosser is a handle that holds preloaded floss bows at a convenient angle. However, the handles of the floss fork or Access Flosser may not be wide enough for scleroderma patients. These devices can be customized with anything from tray acrylic to duct tape to help patients who need a wider handle. Oral B and Water Pik manufacture power-flossing devices. The thicker handles and vibrating action of the Oral B Hummingbird or reciprocating action of the Water Pik Power Flosser are very good adaptations for scleroderma patients. Both are inexpensive and easy to use.

Prescribe fluoride as needed. Professional fluoride applications, prescription rinses and toothpaste, trays, and gels are all useful.

Conclusion

All dentists have adequate training to treat any patient who has scleroderma. Begin with a thorough health history and examination. Use all the tools available—physical therapy, mouth prop, rubber dam, and shorter burs. When treating patients with scleroderma, the most important tools you can use are sensitivity, patience, and ingenuity.

Acknowledgments

The author thanks Michael Kahn, DDS, head of oral pathology at Tufts University School of Dental Medicine, for assistance with editing, and Jeffrey Shmase, communications manager of the National Scleroderma Foundation, for assistance in researching this article.

References

5. Ibid.
Stroke is the third leading cause of death in the United States, according to a 2005 National Center for Health Statistics report. Atherosclerotic plaque in the cervical carotid artery accounts for a major proportion of strokes and also leads to billions of dollars in direct and indirect costs annually.

The carotid bifurcation area, which is a likely site for atherosclerotic plaque accumulation, is well within the field of view of a diagnostic panoramic radiograph. Panoramic radiographs are the most frequently used extraoral images in private dental practices. It is only logical to use this widely available diagnostic tool to screen for calcifications in the cervical carotid arteries. If this oral and maxillofacial manifestation of a systemic disorder is identified during routine dental care and the patient is referred for appropriate follow-up and management, it would help reduce morbidity and bring significant savings in overall health care costs associated with atherosclerosis.

Case Report 1
A panoramic radiograph was obtained in a 60-year-old male as part of a routine dental screening. The panoramic radiograph shows an area of calcification inferior and posterior to the angle of the right mandible (see Figure 1). This area corresponds to the region of carotid artery bifurcation in the neck at the level of the third and fourth cervical vertebrae. The calcification represents atheromatous plaque along the walls of the artery. The patient was on medications for diabetes, hypertension, and hypercholesterolemia. Subsequently, a cone-beam CT scan was obtained for evaluation of implant sites. The CT images revealed additional areas of calcification intracranially in the internal carotid artery within the cavernous sinus (see Figures 2a and 2b). This patient was referred to his primary care physician for evaluation of cerebral circulation and resultant end-organ effects.

Case Report 2
A panoramic radiograph was obtained in an 86-year-old female as part of a routine dental screening. The panoramic image also showed areas of calcification inferior and posterior to the angle of the mandible, bilaterally (see Figure 3). The patient was on medications for hypertension and hypercholesterolemia. This patient was also referred to her primary care physician for further workup and management.
If this oral and maxillofacial manifestation of a systemic disorder is identified during routine dental care and the patient is referred for appropriate follow-up and management, it would help reduce morbidity and bring significant savings in overall health care costs associated with atherosclerosis.

Figure 1. Panoramic radiograph of a 60-year-old male shows an area of calcification inferior and posterior to the angle of the right mandible.

Figure 2a and 2b. A cone-beam CT scan reveals additional areas of calcification intracranially in the internal carotid artery within the cavernous sinus.

Figure 3. Panoramic image of an 86-year-old female shows areas of calcification inferior and posterior to the angle of the mandible, bilaterally.

References
J. Murray Gavel, DMD
Bridging Research and Practice

JENNIFER KELLY
Ms. Kelly is associate vice president of the Forsyth Health Foundation in Boston.

Few dentists have left as lasting a legacy as the late J. Murray Gavel, DMD. Today’s practitioner can learn a great deal by emulating Dr. Gavel’s approach to dentistry. An examination of his life also provides a snapshot of how the profession has changed and matured. As the 14th Annual Dr. J. Murray Gavel Lecture approaches, this article takes a look back at his life.

Dr. Gavel began his career in 1928 as a general practitioner. At that time, most of today’s specialties did not exist. However, Dr. Gavel’s true “specialty” was embracing continuing education and bringing clinical rigor to his dental practice. Although he did not retire until he was 85, Dr. Gavel, who passed away in 1999 at the age of 99, remained excited and challenged by the changes occurring within his chosen vocation.

He believed continuing education was—and is—the key to providing the best dentistry for patients. According to his former student Erling Johansen, DMD, PhD, a former dean of Tufts University School of Dental Medicine (TUSDM), this passion for education continued throughout Dr. Gavel’s career. “When he was 80 years old, someone asked Dr. Gavel why he still took continuing education courses,” says Dr. Johansen. “Dr. Gavel replied that he wanted to apply the latest knowledge to patient care.”

In addition to practicing dentistry for 65 years, Dr. Gavel served as chair, dean, and trustee at TUSDM; vice president of the American Dental Association; president of the International College of Dentists; president of the Pierre Fauchard Society; and trustee of the Forsyth Institute. He chaired the Metropolitan District of the Massachusetts Dental Society in 1948 and served as president of the Society in 1949.
A Lifetime of Discovery

Dr. Gavel was born in Kemptville, Nova Scotia, on May 18, 1900. His family moved to the United States when he was 10 years old. Although his formal education ended in 1923 when he graduated from what was then called the Tufts College Dental School, he set off on a lifetime of learning that should serve as an example to today’s practitioner.

In many ways, Dr. Gavel was ahead of his time. When he entered Tufts in 1920, Dr. Gavel had simply a high school education behind him. Today’s applicant to TUSDM also has a bachelor’s degree and has taken a rigorous scientific course load to prepare for the dental education.

When Dr. Gavel began his practice, the pulley-driven dental drill revolved at a maximum speed of 3,500 revolutions per minute (rpm). Modern dental drills can rotate up to 500,000 rpm, and they generally use burs made of carbon alloys and diamond chips.

From 1939 to 1941, Dr. Gavel assisted in the longitudinal growth study of healthy children at the Harvard School of Public Health. This study was a coordinated research effort encompassing a variety of fields within human biology and medicine with the goal of gaining a more precise understanding of human development and its relation to the health problems of children. Dr. Gavel and other health professionals were part of a team that evaluated how a child’s environment may affect overall growth and development. His work also informed an early study on the eruption and growth of permanent teeth. Dr. Gavel brought dental health into the equation of overall health long before it was the norm.

As a practitioner, Dr. Gavel cared for some of Boston’s best-known citizens, including Leonard Carmichael, president of Tufts and later secretary of the Smithsonian Institution; Earl Tupper, the inventor of Tupperware; and Samuel Proger, MD, a key architect of the New England Medical Center.

Dr. Gavel demonstrated his commitment to research and education by acting as a trustee for the Forsyth Institute, one of the leading independent dental research organizations. Holding this position from 1967 to 1997, he was one of the Institute’s longer-serving board members. According to Forsyth President Dominick DePaola, DDS, PhD, Dr. Gavel represented an ideal trustee for an oral health and biomedical science research organization.

“By all accounts, Dr. Gavel had a passion for bringing the benefits learned in the lab and clinic to the dental practice. He shared Forsyth’s vision for communicating and applying breakthroughs in oral health and disease prevention,” says Dr. DePaola.

During Dr. Gavel’s tenure as a trustee, dental research greatly informed dental practice. When he joined the board, research focused primarily on the ability of bacteria to adhere to a specific target tissue, which revolutionized both dental and medical professions in explaining why different areas of the body attract certain types of organisms.

Honors and Accomplishments

Dr. Gavel took a leadership role in many prestigious organizations. In 1953, he presided over the American Academy of Dental Science. As a regent of the First District of the International College of Dentists (USA Section) from 1958 to 1964, Gavel represented the ICD on an extended tour of the Far East. He was an ideal candidate for inaugurating the Massachusetts Chapter of the Academy of General Dentistry (AGD) in 1971. The AGD’s stated mission—to serve the needs and represent the interests of general dentists and to foster their continued proficiency through quality continuing dental education in order to better serve the public—is similar to Dr. Gavel’s personal goal.

According to Roy Rinkle, DDS, chair of the Gavel Lectureship Endowment Fund, Dr. Gavel was also vital to the survival of the Academy of General Dentistry. “At one point, Dr. Gavel helped the Academy of General Dentistry stay afloat by, along with another colleague, providing its budget for a year,” says Dr. Rinkle.

Throughout his career, Dr. Gavel received recognition from colleagues, including the Milwaukee Research Group Distinguished Professional Service Award; Tufts Distinguished Service Award; an honorary Doctorate of Laws from Tufts; the Northeastern Dental Society Outstanding Dentist Award;
Dr. J. Murray Gavel believed that continuing education was the key to providing the best dentistry for patients. The Etherington Award; and the Fauchard Gold Medal, which is awarded annually by the Pierre Fauchard Academy to a person who has made outstanding contributions to the progress and standing of the dental profession.

Today, Dr. Gavel’s accomplishments are perpetuated through programs that bring together his great passions: education and clinical practice. Dr. Gavel’s vision for dentistry is kept alive through the following programs: the Dr. J. Murray Gavel Center for Restorative Dental Research at Tufts University School of Dental Medicine; the Massachusetts Academy of General Dentistry J. Murray Gavel Memorial Lecture; and the Annual Dr. J. Murray Gavel Clinical Research Lecture at the Forsyth Institute.

According to Dr. Rinkle, “[Dr. Gavel] had a special talent for integrity, clinical accomplishments, research and innovation, and lifelong learning. Every aspect of his life was permeated by his love for his fellow man.”

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Journal of the Massachusetts Dental Society
More than 80 MDS members from across the state participated in the 5th Annual Massachusetts Dental Society Beacon Hill Day by traveling to the State House in Boston to meet with their elected officials. Among the various issues attendees discussed with their legislators was the MDS dental workforce bill—S. 1216—An Act Relative to Dental Auxiliaries. MDS members also expressed concern and reservations about a competing bill that would allow dental hygienists to practice in public health settings without the supervision of licensed dentists.

Senator Harriette L. Chandler (D-Worcester) delivered the keynote address and highlighted several of the accomplishments the legislature has made in addressing the access to care issue. Sen. Chandler, who is the chief sponsor of the MDS dental workforce bill and co-chair of the legislature’s Oral Health Caucus, urged MDS members to stay involved in the legislative process and communicate on a regular basis with their legislators.

To further highlight the Society’s work on the access issue, the MDS Foundation Mobile Access to Care (MAC) Van was parked outside the State House. Legislators and their staffs were invited to tour the Van and receive additional information on the Society’s efforts to expand and enhance access to care for all of the Commonwealth’s residents.
Radiolucencies and radiopacities of the jaws are frequently encountered during the course of routine radiographic examination. Understanding when such radiographic features indicate a need for biopsy and histopathologic examination is important for appropriate patient management.

Radiolucencies can be subclassified by clinical presentation based on location and radiographic appearance. A systematic approach to evaluating radiographic features of an area of radiolucency ensures a more focused differential diagnosis. An effort should be made to assess the borders of a lesion to determine whether or not the lesion is well corticated, has ill-defined boundaries, and has either a unilocular or a multilocular appearance. Additionally, the location of the radiolucency can be used to further characterize the lesion and shape the differential diagnosis.

Radiolucencies are best divided into two categories: lucencies that are associated with teeth, and lucencies that are apparently removed from odontogenic structures. Radiolucencies associated with teeth carry unique differential diagnoses based on the relationship between the lucency and the associated tooth. Tooth-associated radiolucencies typically present in either a pericoronal or a periradicular location. While exceptions do occur, it is generally recognized that pericoronal radiolucencies 2.5 mm or less in greatest dimension may represent follicular tissue, and those that are larger than 2.5 mm in greatest dimension or those lesions associated with pain or cortical expansion require further consideration.

The most common radiolucencies located in a pericoronal relationship include the hyperplastic dental follicle and the dentigerous cyst. However, a number of other odontogenic cysts and tumors may present in a pericoronal configuration and include odontogenic keratocyst (OKC), ameloblastoma, ameloblastic fibroma, and adenomatoid odontogenic tumor, among others. Because treatment and patient management vary considerably amongst these entities, a biopsy with submission of lesional tissue for histopathologic examination is essential. Some key features for each of the above entities can be useful in forming a differential diagnosis. Odontogenic keratocysts can occur over a wide age range, may be unilocular or multilocular, and tend to tunnel through bone long before evidence of cortical expansion is seen. Multiple lesions may be seen in association with nevoid basal cell carcinoma syndrome. Because odontogenic keratocysts are prone to recur, definitive diagnosis is important for appropriate patient management. Ameloblastoma, on the other hand, is rarely seen in individuals under the age of 20, is frequently characterized by cortical expansion, and presents most typically in the molar region of the jaws.

Other odontogenic tumors that may present in a pericoronal relationship include ameloblastic fibroma and ameloblastic fibro-odontoma. Both lesions are more common in the posterior mandible and frequently prevent the eruption of molar teeth. While both lesions present in young patients, ameloblastic fibro-odontoma typically presents in a somewhat younger patient population and is remarkable for a mixed radiolucent-radiopaque appearance due to the presence of calcified tissue within the lesion; it also tends toward a more limited growth potential than the ameloblastic fibroma.

Another lesion that is sometimes seen in association with the crown of an unerupted tooth is the adenomatoid odontogenic tumor. This lesion typically presents in young patients and is unique for its predilection to occur in the anterior maxilla. Whereas the radiolucency associated with a dentigerous cyst typically extends to the cemento-enamel junction (see Figure 1), the radiolucency associated with the adenomatoid odontogenic tumor may extend well beyond the cemento-enamel junction to include the tooth root (see Figure 2). While definitive diagnosis for each of these lesions via biopsy and submission of lesional tissue for histopathologic analysis is critical, key distinctive features such as these may help generate a useful working differential diagnosis and management approach.

Periradicular radiolucencies most commonly represent localized inflammatory reactions associated with nonvital teeth. The two most frequently encountered pathologic entities associated with nonvital teeth include periapical granulomas and periapical cysts; however, the two cannot be distinguished on radiographic...
appearance alone. Although treatment management does not differ between the two lesions, submission of lesional tissue for histopathologic analysis is necessary as other lesions may mimic inflammatory periapical pathosis.

Occasionally, other odontogenic cysts and tumors, hematologic disorders including Langerhans cell disease, early fibro-osseous lesions, giant cell lesions, and primary and metastatic malignancies may present in a periradicular fashion. While histopathologic analysis is critical for definitive diagnosis, some features noted clinically and radiographically may be suggestive of a particular diagnosis and are discussed elsewhere in this review. Such lesions require management protocols tailored to the specific diagnosis.

Some radiolucencies, while not intimately associated with teeth, may insinuate themselves between tooth roots. One such lesion, the central giant cell granuloma, typically presents as a radiolucent lesion removed from teeth; however, it may splay tooth roots and cross the midline when involving the anterior mandible. Pain associated with the lesion, root resorption, paresthesia, presentation at a young age, and recurrence are sometimes seen in lesions exhibiting a more aggressive behavior.

Another lesion found in an interradicular location is the nasopalatine cyst. Derived from residual of the nasopalatine duct, the nasopalatine cyst presents as a radiolucent lesion in the anterior maxilla between the central incisors. Swelling in the region of the incisive papilla is seen with some frequency on clinical examination. Superimposition of the anterior nasal spine on the lesion sometimes gives the impression of a heart-shaped lucency. The teeth respond normally to vitality testing, so an inflammatory periapical pathosis should not be confused with this entity. In some instances, root resorption may be seen.

Lastly, the simple bone cyst (traumatic bone cyst) is an asymptomatic lesion, typically presenting in young patients, that may “scallop” between the roots of vital teeth (see Figure 3). On surgical exploration, an empty cavity is found devoid of a true cystic lining. Surgical exploration alone generally stimulates bleeding into the cavity which, over time, leads to complete resolution; how-

Radiolucent lesions unassociated with teeth include Stafne’s defect, focal osteoporotic bone marrow defect, and the residual cyst. Stafne’s defect may present as an asymptomatic lucency below the inferior alveolar canal in the posterior mandible (see Figure 4), as a 1–1.5 cm radiolucency anterior to the gonial angle, or as a depression on the medial aspect of the mandible, and is remarkable for a well-circumscribed corticated margin. Because the lesion typically presents as a lingual mandibular salivary gland depression, surgical exploration is generally unnecessary as the diagnosis can be made with reasonable confidence based on clinical-radiographic correlation.

Some radiolucent lesions are more commonly seen in edentulous spans of the alveolar bone. The focal osteoporotic bone marrow defect represents a focus of hematopoietic marrow within the alveolar bone. These lesions typically present in women at the site of a previous tooth extraction predominantly in the posterior mandible (see Figure 5). Frequently, fine trabeculations may be seen coursing through the lucency. If teeth are present, the lesion may arise in an interradicular location.

Another radiolucency that may be seen at the site of a previous tooth extraction is the residual cyst. The residual cyst represents a focus of unresolved periapical pathology that persists beyond extraction of a non-vital tooth. Residual cysts are remarkable for corticated margins and are well circumscribed. Since a number of odontogenic and nonodontogenic lesions may mimic residual cysts radiographically, surgical curettage and submission of lesional tissue for histopathologic examination is necessary.

Radiolucencies with ill-defined margins typically represent either inflammatory lesions or malignant processes. Osteomyelitis represents a diffuse inflammatory process presenting as a “moth-eaten” radiolucency secondary to a bacterial infection or extension of a periapical infection. Typically presenting in the mandible of adults, osteomyelitis frequently contains foci of radiopacity within the luency representing osseous sequestration.
Another lesion presenting as an ill-defined lucency is Langerhans cell disease. Langerhans cell disease involving bone most commonly presents in young patients in the first decade of life. Bone lesions may be solitary or multiple and present as radiolucent appearances ranging from aberrant bone or tooth formation. These lesions may leave approximating teeth “floating” without the support of surrounding alveolar bone (see Figure 6).

Other lesions that may show a similar radiographic appearance include periodontal disease and metastatic disease. A lucency of this nature requires biopsy for histopathologic evaluation. If a diagnosis of Langerhans cell disease is rendered, the patient should be evaluated for other bone lesions throughout the body. As indicated, primary and metastatic lesions of alveolar bone are also remarkable for ill-defined borders and destroy alveolar bone at such a rapid rate that surrounding teeth are left unsupported. The radiographic appearance of bone associated with a malignant lesion is frequently described as “moth-eaten,” and cortical perforation and pathologic fracture are not uncommon findings. Such features require biopsy with submission of lesional tissue for histopathologic evaluation to ensure appropriate patient management.

Radiopaque lesions of the jaws are fairly common radiographic findings. Fortunately, in the absence of symptoms and cortical expansion, most radiopacities are innocuous and simply require informing the patient and monitoring with periodic radiographic observation. Radiopaque lesions can be divided into two groups: fibro-osseous lesions and lesions representing either metabolic, reactive, or neoplastic processes involving aberrant bone or tooth formation.

Fibro-osseous lesions of bone present as a spectrum of appearances ranging from radiolucent lesions to radiopaque lesions with a mixed lucent-opaque intermediate stage. Most of these lesions are noted on routine radiographic examination.

Fibro-osseous lesions include cemento-osseous dysplasia, cemento-ossifying fibromatosis, and fibrous dysplasia. Cemento-osseous dysplasia is divided into three distinct subtypes indicating the distribution of the lesions: focal cemento-osseous dysplasia representing a solitary lesion; periapical cemento-osseous dysplasia, classically occurring in the lower anterior quadrant; and florid cemento-osseous dysplasia showing a multifocal distribution.

Focal cemento-osseous dysplasia classically presents in middle-aged Caucasian females at the apices of vital molar teeth, where it usually causes no expansion or symptoms (see Figures 7A and 7B). This radiographic appearance is similar to condensing osteitis and idiopathic osteosclerosis. Periapical cemento-osseous dysplasia classically presents in middle-aged African American females near the apices of the vital mandibular anterior dentition (see Figure 8.). Lastly, florid cemento-osseous dysplasia is remarkable for a predilection to affect middle-aged African American women with characteristic multifocal involvement and a frequently bilateral distribution. Florid cemento-osseous dysplasia is sometimes associated with the development of simple bone cysts.

Generally, lesions of cemento-osseous dysplasia do not require treatment; however, decreased vascularity of the bone in these lesions predisposes patients to poor healing following either extraction or implant placement. This condition also predisposes to secondary osteomyelitis. It is recommended that patients diagnosed with cemento-osseous dysplasia maintain a meticulous oral hygiene regimen and seek professional care at routine intervals. Unlike cemento-osseous dysplasia, cemento-ossifying fibroma is less commonly encountered and typically presents as a well-defined lesion with some associated cortical expansion most often arising in the posterior mandible. Root resorption and divergence is often seen with large lesions remarkable for downward bowing of the inferior mandibular cortical bone (characteristic balloon-shaped expansion). Surgical excision is generally indicated and is often permitted with minimal difficulty due to the fact that the lesion is often well demarcated from the surrounding bone by a fibrous capsule.

Unlike the cemento-ossifying fibroma, the lesions of fibrous dysplasia are much more diffuse with an ill-defined boundary between lesional bone and surrounding uninvolved bone. The radiographic features of fibrous dysplasia are sometimes described as “ground-glass” secondary to the marked bony remodeling and subse-
A systematic approach to evaluating radiographic features of an area of radiolucency ensures a more focused differential diagnosis.

Additionally, the location of the radiolucency can be used to further characterize the lesion and shape the differential diagnosis.

Frequent numerous bony trabeculae that accumulate within these lesions. Fibrous dysplasia, which usually develops in the first two decades of life, is often associated with some degree of facial enlargement in the affected area and involves the maxilla with greater frequency than the mandible. When the mandible is involved, characteristic superior displacement of the inferior alveolar canal may be seen.

Radiopaque lesions involving aberrant bone or tooth formation include idiopathic osteosclerosis, condensing osteitis, odontoma, cementoblastoma, Paget's disease of bone, osteomyelitis, osteosarcoma, and some odontogenic tumors. Idiopathic osteosclerosis presents as a focal asymptomatic, nonexpansile area of radiopacity, the cause of which cannot be attributed to local factors. Idiopathic osteosclerosis is frequently seen between and apical to the roots of posterior teeth; however, the radiopacity maintains a distinct boundary from the apices. Often presenting as a pear-shaped area of radiopacity, it is notable that the opaque changes do not breach the crest of the alveolar bone (see Figure 9). Any radiopacity that extends beyond the level of the alveolar crestal bone should be viewed with suspicion for osteosarcoma, and the periodontal ligament (PDL) space should be carefully evaluated for symmetric widening associated with this disease.

Distinct from idiopathic osteosclerosis, condensing osteitis represents a usually well-circumscribed, localized, and completely radiopaque lesion that develops as a periapical reaction of bone to a low-grade chronic pulpitis (see Figure 10). As such, the associated tooth may be sensitive to percussion or have an obvious source of infection or irritation such as a deep restoration or caries; however, evidence of cortical expansion should not be appreciated. More commonly encountered in young adults, condensing osteitis presents at the tooth apex and may resolve following management of the underlying chronic irritation or infection.

The odontoma is the most common odontogenic tumor and can occur anywhere in the jaws. This tumor is most commonly found in children and young adults, is often asymptomatic, and is usually an incidental radiographic finding. Odontomas can, however, prevent eruption of surrounding teeth. Some resemble collections of miniature teeth while others are amorphous radiopaque conglomerations similar in radiodensity to dentin and enamel.

Compared to the odontoma, the cementoblastoma is a very rare odontogenic tumor. It always develops at the root apex and most often involves a mandibular molar tooth. The lesion, because it is fused to the root surface, often causes a loss of the normal periodontal ligament space. Most such lesions show a thin radiolucent rim around the well-defined radiopacity. Percussing a tooth with fused opacity usually elicits a dull “thud” compared to the typical resonance of an uninvolved tooth. Other rare odontogenic tumors that are predominantly radiolucent but usually present with varying degrees of mixed radiopacity due to their production of calcification or tooth structure include ameloblastic fibro-odontoma, adenomatoid odontogenic tumor, and calcifying epithelial odontogenic tumor.

Paget's disease of bone is a metabolic condition of older individuals that affects bone turnover. It is almost always seen in the elderly and rarely diagnosed before the age of 40. Because it is metabolic, it tends to present as a poorly defined radiopaque change that has been described as “cotton wool” in appearance. Another distinguishing feature is associated hypercementosis of adjacent teeth, and some degree of facial deformity and bone pain are often present. Typically affecting the maxilla, expansion associated with Paget's disease often causes formation of multiple diastema. Diffuse osteomyelitis may show a similar radiographic presentation as Paget’s disease in that both may have irregular margins and a somewhat mottled appearance on the bone. Osteomyelitis typically occurs in an area of unresolved odontogenic infection or in patients with predisposing factors that may make the bone more susceptible to infection, such as trauma, Paget's disease, or radiation therapy (osteoradionecrosis).

Osteosarcoma of the jaws is uncommon, with approximately 150 cases diagnosed per year in the United States. Lesions are most common in young adults and may be associated with discomfort and cortical expansion. Like Paget's disease and osteomyelitis, osteosarcoma may present as a mottled radiopaque mass with irregular margins. Some lesions produce a “sunburst” pattern.
representing exophytic bone production on the surface of the lesion. Features suspicious for osteosarcoma include symmetric PDL space widening of the surrounding teeth, root resorption, and supracrestal bone formation (see Figure 11).20,21

Because most radiopacities of the jaws are innocuous, periodic radiographic follow-up exam is prudent in most cases. However, all radiopaque lesions should be evaluated in context with the clinical signs (particularly expansion), symptoms, patient demographics, and the condition of the surrounding dentition. Consideration of these clinical factors, along with close observance for any particular distinguishing radiographic features, is necessary when formulating a differential diagnosis and deciding if further investigation or exploration is necessary.

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A 24-year-old white female was referred to the department of oral and maxillofacial surgery at Tufts University School of Dental Medicine by her general dentist. She had recently noticed fullness in her right lower jaw but was not experiencing any pain or other symptoms. Her medical history was noncontributory, and her surgical history consisted of a noncomplicated hernia repair five years prior. She was on no medications and denied smoking, drug use, or frequent alcohol consumption.

Clinical examination revealed a buccal and lingual expansion of the right posterior mandible in the area of teeth numbers 31 and 32 (see Figure 1). The examination was negative for trigeminal nerve paresthesia or mobility of teeth. There was no temporomandibular joint (TMJ) clicking, tenderness, or trismus noted. The remaining head-and-neck, as well as oral, exam were unremarkable.

The panoramic radiograph revealed a well-circumscribed radiolucency, approximately 2 cm x 1.5 cm, associated with teeth numbers 31 and 32. There was no evidence of radiopacities or destruction of root structure (see Figure 2). A subsequent head CT was then performed at Tufts-New England Medical Center to obtain additional information regarding its extension in all three dimensions. The CT measured the lesion to be 2.3 cm x 1.3 cm and was positive for thinning of the lingual cortex (see Figure 3). There was no evidence of periosteal reaction, invasion into soft tissues, or any other soft-tissue reaction.

The patient underwent a biopsy, which was submitted for histological examination by both the oral pathology and the general pathology staff.

**Histological Findings**

Histopathologic examination of the sections submitted demonstrated a cystic epithelial lining and connective tissue wall. The cystic wall lining revealed odontogenic epithelium, which exhibited marked thickening and reversed polarization of the basal cell layer. The superficial layers of the epithelium resembled stellate reticulum. There were foci of cells that exhibited individual keratinization. The connective tissue wall showed foci of epithelial islands composed of a peripheral layer of cells exhibiting reversed polarization (see Figure 4). There was evidence of intraluminal proliferation with the possibility of some intramural changes (see Figure 5).

**Diagnosis**

Intramural unicystic ameloblastoma
Discussion

In 1977, Robinson and Martinez were the first to describe the unicystic ameloblastoma as a distinct class of ameloblastoma.¹ It is debated whether the lesion arises de novo as a neoplasm or as a neoplastic change from a nonneoplastic epithelial lining. An ameloblastoma, as defined by the World Health Organization in 1992, is a “systemically benign but locally invasive polymorphic neoplasm consisting of proliferating odontogenic epithelium, which usually has a follicular or plexiform pattern, lying in a fibrous stroma.” This description fits that of the unicystic type with the distinctions that it presents as a unilocular lesion, tends to be present at a younger age, and, most importantly, depending on the subcategory, can be cured by more conservative treatment than the more traditional multicystic type.

The unicystic type accounts for approximately 10 to 15 percent of all intraosseous ameloblastomas. More than 90 percent of the unicystic ameloblastomas are found in the mandible, usually in the posterior. More than 50 percent of the lesions are found during the second decade of life and present as painless swellings.² Radiographically, the majority of patients have a well-circumscribed radiolucency that surrounds a portion, usually the crown, of an unerupted third molar.

More recently, Marx discussed the possible misuse of the term “unicystic ameloblastoma” because it, too, can be classified further histologically, with each classification warranting a different treatment modality. The unicystic lesion can be divided into three major categories: in situ, microinvasive, and invasive. The in situ category describes both mural and intraluminal histological appearances. The mural describes an ameloblastoma arising from and limited to the epithelial lining of the cyst, whereas an intraluminal has the ameloblastoma proliferating within the lumen of the cyst.³ Marx and colleagues state that the in situ category of lesions are typically cured with enucleation.

The microinvasive ameloblastoma is also divided into two subcategories: intramural microinvasive and transmural microinvasive. An intramural microinvasive ameloblastoma is described histologically as “an ameloblastoma arising from the epithelial lining and proliferating into the connective tissue layer of the cyst.” The transmural microinvasive ameloblastoma describes further invasion of the ameloblastoma extending throughout the entire thickness of the connective tissue layer.³ One of several resection approaches is necessary for treatment of the microinvasive unicystic ameloblastoma. Another category of unicystic ameloblastoma, called the invasive ameloblastoma, describes an ameloblastoma that has not only proliferated throughout the entire connective tissue thickness but has also invaded adjacent bony structures, and resection is the necessary treatment.³

The unicystic ameloblastoma can appear clinically and radiographically very similar to nonneoplastic odontogenic cysts such as a dentigerous cyst, odontogenic keratocyst, or glandular odontogenic cyst.⁴ Therefore, histological confirmation is necessary for an accurate diagnosis and determination of appropriate treatment modality.

Dentigerous cysts are the most common type of developmental odontogenic cysts.² Similar to the unicystic ameloblastoma, the dentigerous cyst encloses the crown of an unerupted tooth and presents as a painless swelling. It is only through histopathologic examination that a distinction can be made.

Odontogenic keratocysts arise from cell rests of the dental lamina.² Presentation can range from a single isolated radiolucent lesion to multiple affected sites in multicystic patterns. These cysts tend to grow in an anterior-posterior direction with minimal bony expansion, and similar to the unicystic ameloblastoma, most cases are asymptomatic until they reach neurovascular structures. Again, histopathologic examination of the cyst confirms diagnosis.

Glandular odontogenic cysts are relatively recent in their exception as a distinct diagnosis. The cyst tends to appear in the third decade of life and is almost always found in the mandible.² It has a tendency to be aggressive in nature, and treatment is highly dependent on the size and number of recurrences. As mentioned previously, this lesion shares a common clinical appearance with the unicystic ameloblastoma, dentigerous cyst, and odontogenic keratocyst, and is only distinct by histological evidence of glandular or salivary features found within the cyst.

In regard to the patient with the diagnosis of intramural unicystic ameloblastoma, the treatment options included enucleation and resection. The patient opted to undergo enucleation of the cyst and odontectomies of teeth numbers 31 and 32.
(tooth number 31 was removed at the time of the biopsy). This was performed under general anesthesia. Ivy loops were put in place for maxillomandibular fixation in preparation for a possible pathologic fracture. The cyst and associated tooth number 32 were completely removed (see Figures 6 and 7), and a peripheral ostectomy was performed for completeness. The site was then closed primarily over sound bone.

**Conclusion**
The patient’s postoperative course has been uneventful and she has done well. She will be seen on a regular basis with periodic radiographic evaluation to monitor the healing of the bony defect and to evaluate for any recurrence.

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**References**

EXFOLIATIVE CHEILITIS

EXFOLIATIVE CHEILITIS REPRESENTS A CONDITION IN WHICH THE lips are chronically inflamed, dry, and flaky. It presents over a wide age range, but is often prevalent in young women. Although the lower labial vermilion is most commonly affected, both lips may be involved. Occasionally, the process may extend to involve perioral skin presenting as dry, flaky zones of erythema.

The condition typically results from either chronic factitial (self-induced) injury, or a contact hypersensitivity reaction leading to persistent crusting of the labial vermilion. Often, there is dual infection with candida and staphylococcus from skin in cases of exfoliative cheilitis with a factitial etiology. Education to avoid lip licking may lead to resolution and may be further enhanced by using 1% Vytone cream topically. Alternatively, nystatin cream combined with equal parts of an over-the-counter antibacterial ointment such as Neosporin may also be effective.

Common agents causing contact hypersensitivity reactions include ingredients found in lipsticks, lip balm, mouthrinses and toothpastes (particularly tartar control varieties), and foods. Careful review of a patient’s medical and social history may help in identifying a suspected allergen. In rare cases of exfoliative cheilitis associated with psychological disturbance, antidepressant medications may be considered in close consultation with a patient’s physician.

Scaling and erythema of the vermilion border of the lips.

Correction
Due to an editorial error, the figure caption in the Spring 2007 (Vol. 56/ No. 1) Pathology Snapshot was incorrect. The figure caption should have read: “Pigmentary changes in a heavy smoker confined to the anterior attached gingiva.” The image was courtesy of Dr. Brad W. Neville. The JOURNAL apologizes for this error.

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JACK L. HERTZBERG, DMD
Dr. Hertzberg is an orthodontist with practices in Cambridge and Needham.

CLASS I MALOCCLUSION

A 38-YEAR-OLD WOMAN PRESENTED FOR orthodontic treatment, requesting correction of her upper and lower crowding with Invisalign®. Her history included previous orthodontic treatment without extractions, periodontal involvement, reciprocal temporomandibular joint (TMJ) clicks on opening, and restorative needs.

The clinical examination and review of the patient’s orthodontic records revealed a Class I malocclusion with an acceptable overbite and overjet, moderate upper and lower crowding, retroclined incisors, and poor axial inclination of the upper left central incisor. An examination of her TMJ revealed bilateral clicks on opening with occasional soreness, but no muscle tenderness or deviation with opening or closing. Except for some periodontal involvement, the patient’s panoramic radiograph was within normal limits and her cephalometric radiograph exhibited a Class I skeletal pattern with retroclined incisors.

After consulting with the patient’s periodontist and general dentist, it was decided to use Invisalign aligners to take advantage of movements that are most successful with the Invisalign appliance and to minimize forces that might affect the periodontium adversely. Maxillary and mandibular proclination with reproximation allowed for incisor alignment, kept forces to a minimum on the periodontally involved posterior teeth, and provided excellent profile and smile lines. Also, aligners provide nearly full-time disarticulation and the patient reported a decrease in soreness with opening.

Correction of the axial inclination of anterior teeth is a difficult movement and takes a considerable amount of time to achieve with the Invisalign appliance. This type of movement also requires significant anchorage forces to be placed on adjacent teeth. Part of the patient’s multidisciplinary treatment plan, which tried to keep forces to a minimum and to keep treatment time as short as possible, was to prevent further periodontal degeneration and address the patient’s chief complaint: esthetic alignment. For these reasons it was decided not to upright the upper left incisor. The patient was happy with her result, but if the inclination of the incisor becomes a concern, correction can be obtained restoratively. She is presently wearing Invisalign retainers nightly.

The multidisciplinary approach to treatment allowed the patient to achieve her esthetic goals and to maintain her periodontal health.

Figure 1. Pretreatment photo shows a Class I malocclusion.

Figure 2. Posttreatment photo shows improved alignment for both mandibular and maxillary anterior teeth.

About Clinical Case Study

A Clinical Case Study is defined as a written and visual assessment of a clinical case wherein the author presents before-and-after radiographs and/or photographs as a means to discuss the diagnosis, treatment plan, and actual treatment of a particular situation. The purpose of this study is to encourage Journal readers to contribute a clinical response to the cases presented. It is our hope that many practitioners will contribute their ideas and treatment approaches, with the end result being a means for communication and learning.

Please address your correspondence to Clinical Case Study, JOURNAL OF THE MASSACHUSETTS DENTAL SOCIETY, Two Willow Street, Suite 200, Southborough, MA 01745. Responses may be published in a future issue of the Journal.

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BOOK REVIEWS

NORMAN BECKER, DDS, EDITOR EMERITUS

QuintEssentials 5: Periodontal Medicine—A Window on the Body
IAIN L. CHAPPLE AND JOHN HAMBURGER
Quintessence Publishing

Building on differential diagnoses for periodontal manifestations of systemic diseases and the role of special investigations, this compact text of immediate practical relevance “aims to provide the reader with an illustrated approach to managing the oral consequences of systemic diseases that present within and around the periodontal tissues.” As promised in the preface, the authors accomplish that goal.

Using the clinical appearance of a lesion as the starting point—and using color as an aid in diagnosis as opposed to identification of gingival conditions—the authors teach a logical step-wise approach to differential diagnosis and subsequent management. The text focuses on non-plaque-induced lesions, some extremely common and others extremely rare. Each chapter delineates the lesions that fall within the boundaries of that chapter and discusses these conditions.

The strategy, perhaps best summarized as “recognize, examine, understand, and advise,” is presented in a text that can be read in a matter of hours as opposed to the time required to study the more detailed periodontal books. Excellent clinical pictures and slides help the reader to better understand the text. This QuintEssentials volume can be kept on the shelf as an aid to clinical practice.

QuintEssentials 2: Panoramic Radiography
VIVIAN RUSHTON AND JOHN ROUT
Quintessence Publishing

With its images of jaws and their respective dentition, as well as much of the surrounding tissues, dental panoramic radiography is becoming more popular as a diagnostic instrument. Panoramic Radiography, part of the QuintEssentials of Dental Practice series, will make the practitioner familiar with the imaging technique as well as the interpretation of panoramic images.

Beginning with the history of the development of the panoramic graph, the authors take the readers from the past to the future of this technique. The various aspects of panoramic radiology are all covered and delivered in an easy-to-understand presentation, including history and development; radiographic technique; anatomy; radiation dose and risk; radiography in general dental practice; quality assurance; and interpretation of disease.

The advantages and/or disadvantages of periapical as well as panoramic radiography are also interpreted within the text.

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DON’T GO BREAKING MY HEART, a made-for-TV movie, shows a male dentist hypnotizing a woman. He flashes a light in her dull, unblinking eyes. He waves around a pencil-like wand equipped with a sparkly crystal where the eraser should be. “You’re getting sleepier,” he intones. Then, instead of firing up the handpiece, this dentist orders his zombied-out patient to invite him over for dinner.

Maybe it wasn’t a big deal, but I’ve lived through Marathon Man, a movie that burned a scorched mark in the moviegoing imagination big enough to keep patients shying away from their dentists for 20 years.

Why is it so hard for the entertainment moguls to get their dentist portrayals right? The short answer is, because they don’t want to. Movies, television shows, and novels may distort dentistry on purpose to suit the narrative needs of amusement. Dentistry is an easy target. For one thing, there’s the schadenfreude thing: the public is entertained by watching other peoples’ pain. For another, satire is an equalizer, diffusing fear and making authority figures less intimidating.

But there may be at least three other reasons dentists get misrepresented—because of things we dentists do ourselves.

First, we work alone. Dentists seldom practice in a hospital or in group settings. So no one is around to accurately observe.

Second, we are secretive. It’s not that we have something to hide, but rather that we tend to seek shelter, like soldiers in a foxhole. Have you ever hesitated before revealing your profession at a cocktail party? Any dentist a year or two out of school has already spent more than a few social evenings performing impromptu consultations and defending root canal fees.

Third, we want our efforts to look effortless. We attract patients with a gentle, painless touch. But we may inadvertently give the wrong idea. A teenager recently said to me, “Dentistry’s easy, right? I mean, once you get through dental school, you have it made.”

Dentistry may never get a Marcus Welby, and George Clooney probably won’t ever play a prosthodontist in a movie. But someday, maybe the entertainment industry could get dentistry right. We could help.

Complaining won’t do it. A few years back, representatives of organized dentistry wrote a letter to movie studio executives protesting the increased smoking depicted in the movies. The movie executives laughed.

If we want to get an accurate reading on dentistry, we should give one. We ought to practice being open and forthright.

Dentistry is difficult. It is medicine that involves a lot of surgery, which sometimes can go wrong. The body is incredibly complicated, especially the head, which houses an enormous concentration of nerves. The mouth houses organs that heal poorly.

Next, we need to stand up straight. “My son’s a very successful oral surgeon,” a mother boasted to a young woman she met on the subway in a nationally televised shampoo commercial a few years ago. We should be as proud of dentistry as our moms are. Dentistry is expensive, but it is not overpriced. Good dental care is a blessing to the public.

One more thing: We can relax and find the humor in dentistry. A sheet-metal sign shaped like a molar hanging at a dental office in New Mexico is a favorite of mine. Creaking in the breeze, it startles with its punning ironies. It reads, going down the roots, “Less pain dentist . . . purse extractions, X-rated rays, London bridges, British crowns, land fillings, sports caps, hot plates.”

That doesn’t mean we can get too relaxed. Screenwriter William Goldman reportedly credited his idea for the evil Nazi dentist in Marathon Man to a suggestion from his own periodontist.
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Questions? Contact Michelle Sanford, 800-342-8747, ext. 253.

Yankee Dental Congress® 33

There are many ways to volunteer at Yankee Dental Congress. Currently, opportunities exist for Presiding Chair (PC) for Scientific Sessions at YDC 33 in January. The Presiding Chair introduces the speaker, asks that evaluation forms be completed, and gives out the “Secret Code Number” for CEUs at the end of the session.

Questions? Contact Tammy Putney, 800-342-8747, ext. 256.

Council and Committee Positions

The voluntary structure of the Massachusetts Dental Society enables any member to have an impact on the Society and the profession. As a volunteer, you have a direct effect on shaping the Society’s policies and programs.

Find out how you can participate by visiting the MDS Web site at www.massdental.org/members/councils.

Questions? Contact Marc Kaplan, 800-342-8747, ext. 243.
The old adage about death and taxes extends to claims as well if you are a dentist. Statistics reveal that over a 30-40 year career, dentists will most certainly experience at least one malpractice claim. More likely, it could be three or four.

Whom do you want on your side when adversity strikes?

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