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Improving Oral Health and Prenatal Health Care

MASTERS OF OUR OWN FATE?

The Massachusetts Dental Hygienists' Association has filed a bill in the state legislature which, if it becomes law, will have a number of negative effects on the way in which dentistry is practiced. This proposed law would allow the unsupervised practice of dental hygiene in settings such as nursing homes and public health facilities, with the hygienists being directly reimbursed for their services.

A second provision of this proposed law would require all dentists to provide services to MassHealth patients as a requirement for licensure with the Board of Registration in Dentistry (BORID). While we encourage our membership to voluntarily offer these services to increase access to oral health care for the indigent, elderly, and children, we believe that this requirement is not a good idea. BORID's hands should not be tied in this manner.

We feel, in no uncertain terms, that both parts of this proposed legislation have great potential for abuse and are not in the best interest of the public. A dual quality-of-care system of dentistry would become a reality. The mindset is counterproductive and contrary to the team approach that is the foundation of the profession. It is imperative that all members of the dental team work together for the common good of the patients we treat.

The political process to increase access to the underserved should not be adversarial. It should be constructive and cooperative. To this end, the Massachusetts Dental Society is taking a number of steps to promote the team approach in the provision of dental care, with special emphasis on those populations that are currently underserved.

The Society is sponsoring legislation—the dental auxiliary bill—that meets multiple needs. As Dr. Alan Gold, MDS president, stated, "It would preserve the dentist as the leader of the oral health team, while allowing the delegation of expanded duties to professionals trained and certified in expanded functions. The dental auxiliary bill is the first step in preparing a higher-trained, better-qualified, more valuable dental health professional workforce." This bill will define classifications of dental auxiliaries, including certified dental assistant, expanded function dental assistant, registered dental assistant, and dental assistant with advanced training, as well as clearly define an additional classification of expanded function dental hygienist.

The MDS's approach, while providing increased access to care, requires that those whose functions are expanded beyond the current scope of auxiliary practice provide safe and competent services, ultimately under the supervision of a dentist.

Because the Society believes in the importance of the unity and strength of the dental team, we have established a new classification of auxiliary membership in our association. Hygienists, dental assistants, and office personnel now have the opportunity to be members of the Massachusetts Dental Society so they can be active participants in the process of molding the future direction of the profession.

In the final analysis, we must become proactive in changing the definitions and scope of practice of the members of our dental team so that we can meet the needs of the patients we currently serve and safely provide therapy to those who presently do not have access to oral care. We must, as dentists, guide the inevitable process of change; otherwise, the responsibility for the oral health and well-being of the public could be taken out of our hands. ■

David B. Becker

Arthur I. Schwartz

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FINANCIAL SERVICES CORNER

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BABY BOOMERS LOOK TOWARD RETIREMENT

In roughly 10 years, the most chronicled generation in the United States—"baby boomers"—will gradually enter retirement. At that point, each wave of baby boomers will quickly discover if their retirement plans, Social Security, and personal savings will be sufficient to maintain their existing lifestyles and needs.

Baby boomers—a name given to those born between 1946 and 1965—have been noted for their creation of the "computerized age," quest for physical fitness, and expectation for living many years. As the boomers cross into middle age, many will begin to focus their attention on retirement.

Unlike the previous Great Depression-to-World War II generation, many baby boomers feel they cannot depend on receiving Social Security benefits during their retirement years. In fact, many economists anticipate Social Security trust funds may be bankrupt in about 30 years.

To further compound these worries, many boomer employees may not have employer-funded pension plans. In today's business setting, the employee—not the employer—generally assumes full responsibility for funding his or her own retirement through defined contribution plans such as the 401(k). As a result, with retirement approaching rapidly, it's fairly common for uncertainty and worry to fill the minds of those without a guaranteed pension.

Broadening Perspectives

What can boomers do to determine if their savings and assets will sufficiently fund their retirement years? Certainly, definitive answers are often elusive because life is generally unpredictable and filled with many variables. After all, no one really knows for sure what the future holds. However, even with these constraints, boomers can gain much insight by estimating and analyzing the following:

- Potential income sources (e.g., annuities, income-producing real estate, inheritances, etc.)
- Costs of future health care needs
- Annual return from savings
- Projected balances of retirement plans
- Annualized rate of inflation over retirement years
- Amount of Social Security income to be received
- Percentage of present income required during retirement years
- Length of years retirement may last or life expectancy

Survey Says . . .

A 2002 survey conducted for AARP (formerly known as the American Association of Retired People) found that only 20 percent of baby boomers are very satisfied with their personal finances.[1] In contrast, 31 percent feel their financial situation is worse than they expected at this stage in their lives. Only about one-half of boomers (51 percent) feel confident that they will achieve their financial goals.

As is true of every generation facing the retirement planning process, baby boomers should have a disciplined savings program in place. If you're a baby boomer, keep in mind that periodic or haphazard saving may be counterproductive. With a commitment to success and a scheduled plan, you can work toward building the necessary retirement funds to secure your own financial future. ■

Reference

1. Princeton Survey Research Associates. Boomers at midlife: the AARP life stage study. 2002.

GEORGE GONSER, MBA
Mr. Gonser is the managing director of MDSIS.

HEALTH CARE REFORM—CAN IT WORK?

Last year at this time, I wrote on the "State of the Massachusetts Health Insurance Industry." At that time, the finalization of the Health Care Reform Law was a few weeks away and the industry was witnessing the first single-digit (average) increase in insurance costs in almost 10 years. There was anticipation regarding the potential of this health care law. There was hope.

Fast-forward to 2007 and even though the implementation of the Health Care Reform Law is about 80 percent complete, the concerns are increasing on a daily basis.

Originally, the Health Care Reform Law outlined five main goals:

- Expand coverage to the approximately 380,000 uninsured residents in Massachusetts, and cover more than 95 percent of all Massachusetts residents, thereby reducing the uncompensated care pool.
- Provide a health care/insurance framework to satisfy the federal government's requirements, thereby availing the state of $385 million in federal funding.
- Reduce the dependence of the free-care pool with the hope of eliminating it over a period of time.
- Provide more low-cost health insurance options for the buying public.
- Provide medical data and reporting transparency to empower a more educated health care consumer.

But there is an additional desired goal: increasing the insurance-purchasing audience in Massachusetts. While this is noble, is it truly attainable with the health care reform vehicle? Here are some thoughts to consider.

The carriers were asked to submit "competitively priced plans" by mid-January. When the submission deadline passed and the rates were disclosed, there was a pushback by the state to have the carriers sharpen their pencils and resubmit lower-cost plans. The reality in Massachusetts is that health insurance is very expensive in this state. We have seen double-digit increases for the past eight years. The average cost of an individual plan is $450 and a family plan is $1,250. So if the state really thought that it could get the carriers to provide a $175-a-month plan with full prescription benefits and mandated state benefits, it isn't likely to happen. If you shave the prescription benefits, increase and reshape co-pays, and add deductibles, then maybe it becomes more feasible.

The Health Care Reform Law basically subsidizes most or all of the costs of insurance for those whose incomes fall within 300 percent of the federal poverty level. For those beyond this poverty level, they will have a series of insurance products from which to choose. For many of these people, being asked to absorb $300 a month for an average plan, for example, plus co-pays and deductible expenses, means going from having everything covered (free care) to now having to pay in excess of $4,000 annually. This will create a large financial hardship for many, if not most. The options are to request a hardship waiver or to go without insurance. Either way, the free-care pool will continue to be taxed.

So, if the goal is to reduce and ultimately eliminate the free-care pool, this system must be altered. One final thought: If you estimate, based on 7 percent annual increases, the current $300 monthly premium will be $600 in 10 years. If that is the case, no one will be able to afford health insurance, and most likely a new vehicle for health care will need to be put in place.

The facts, as presented, cast doubt on the viability of the current Health Care Reform Law. The implementation challenges grow each day, and as of late March 2007, some of the deadlines for implementation have been pushed back. This, and the fact that the initial cost projections are coming in higher than anticipated, could drive people toward asking the key question, "When will the United States have a universal or single-payer plan?" ■

A "Baby Step" to Improving Prenatal Health Care

MARY E. FOLEY, RDH, MPH
Ms. Foley is project director of Improving Perinatal and Infant Oral Health, the Children's Dental Health Project in Washington, DC.

It has been more than a year since I left my position as state dental director in the Massachusetts Department of Public Health's Office of Oral Health to lead the national campaign aimed at promoting perinatal and infant oral health. The project, titled Improving Perinatal and Infant Oral Health, is a collaborative initiative among the federal Maternal and Child Health Bureau, the American Academy of Pediatric Dentistry, and the Children's Dental Health Project.

From the moment I stepped foot in Washington, DC, I realized that the scope of the project was immense and that the first step toward accomplishing the goals of the project would be to build infrastructure and capacity through national and state partnership development.

From my earlier days working for the Massachusetts Department of Public Health, and by participating in the Massachusetts Special Legislative Commission on Oral Health, I learned of the importance of multidisciplinary collaboration for programmatic expansion and policy development. I have further learned that only through *both* can we hope to achieve sustained systemic change.

Since I left Massachusetts, I have come to recognize and appreciate more fully how Massachusetts oral health stakeholders are truly national leaders in the delivery of oral health care services, dental workforce issues, and access to care for vulnerable populations. To date, few states provide dental care for pregnant women—yet in Massachusetts, low-income women who are Medicaid eligible are able to access the appropriate oral health care services they, like all people, are entitled to. This is why I am back in Massachusetts engaging your support to collaborate in an effort to improve perinatal and infant oral health.

But this national campaign is not about low-income pregnant women alone. It's about *all* women of childbearing age (15–44 years). Unfortunately, many women, regardless of income, ethnicity, or educational level, fail to receive routine oral health care services during pregnancy. The reasons vary but primarily point to the lack of scientific evidence available to support professional policies, recommendations, and clinical guidelines for both medical and dental providers. Consequently, obstetricians often fail to refer their patients for dental care, and many dental providers are reluctant to treat pregnant women for fear of potential dental-medical complications. As a result, many pregnant women postpone dental care that could and often should be attended to.

For decades, the general public at large has recognized the importance of prenatal health care in contributing to healthy pregnancies with positive birth outcomes. Further, providers, insurers, and policymakers alike have placed significant value on prenatal visits. The American College of Obstetricians and Gynecologists recommends that all pregnant women should receive at least 13 prenatal visits during a full-term pregnancy

Women want to do what is best for the health of their unborn child.

Medical and dental providers must collaborate not only on an organizational level

but also on provider-to-provider and provider-to-patient levels to

bring about comprehensive, coordinated health care for all of their patients.

(39 weeks) and that these visits begin within the first trimester. Women who do not receive the recommended prenatal care are at significant risk for delivering preterm (delivery before 37 weeks gestation) and low-birth-weight (less than 2,500 grams, or 5.5 pounds) infants.

The Centers for Disease Control and Prevention (CDC) suggest that prenatal assessment, treatment for medical/dental conditions or risk reduction, and education/anticipatory guidance provide the framework that contributes to reductions in illness, disability, and poor birth outcomes. Through these various components, medical and dental providers may assess health status, provide education, promote health, anticipate problems, and provide individualized patient-centered care, which may ultimately reduce the potential for perinatal and infant problems.

So if the general public, medical providers, insurers, and policymakers all agree that prenatal health care is important, why has oral health once again been left by the wayside?

Oral Health = Overall Health

In recent years, some have proposed that oral health has a direct impact on pregnancy outcomes. Since the mid-1990s, much information has emerged regarding the potential association between periodontitis and preterm and low-birth-weight infants. While some studies suggest that pregnant women with periodontitis are at risk for delivering preterm and/or low-birth-weight infants, others have refuted these claims. To date, none has demonstrated a true cause-and-effect relationship.

Two randomized clinical trials supported by the National Institutes for Health have been specifically exploring the effects of prophylactic or nonsurgical interventions in pregnant women who present with periodontal disease. Results of the first study completed this year, "Obstetrics and Periodontal Therapy (OPT)," were published in the November 2, 2006, issue of the *New England Journal of Medicine*.

According to the study results, nonsurgical treatment of periodontitis in pregnant women is safe and effective in improving periodontal health, but it does not significantly modify the rates of preterm birth, low birth weight, or fetal growth restriction.[1] The second study, "Maternal Oral Therapy to Reduce Obstetric Risk (MOTOR)," is currently under way, and the results are not expected to be released until later in 2007.

Regardless of the outcomes of both of these studies, I propose that oral health care should become routinely incorporated into the protocols of comprehensive prenatal health care. I further propose that organized dentistry take the lead in ensuring that appropriate standards of oral health care services for pregnant women be established. As a mother of five who spent much of her 20s in an ob-gyn office, I can personally attest to the lack of attention, referrals, and recognition of oral health during prenatal health care visits. So many opportunities exist during pregnancy for oral health education and intervention by both dental *and* medical providers. It is a time in a woman's life when both medical and dental insurance benefits are generally readily available and when most women are amenable to preventive care and treatment options. Women want to do what is best for the health of their unborn child. Medical and dental providers must collaborate not only on an organizational level but also on provider-to-provider and provider-to-patient levels to bring about comprehensive, coordinated health care for all of their patients.

In Massachusetts, in an average week 1,542 babies are born; 165 are born preterm and 117 are born low birth weight. About one in 50 infants is born to women who initiated prenatal care in their third trimester. These numbers represent a significant demand for oral health care services among pregnant women, and the need for our immediate attention in addressing this demand.

If we, as oral health providers, are to effectively contribute to the health and well-being of our maternal and child populations, then we need to be proactive in promoting oral health care among our pregnant patients, as well as in our offices, in our communities, and with our medical colleagues. As this campaign moves forward, I invite you to join me in this combined national, state, and community effort to improve perinatal and infant oral health. ■

Reference

1. Michalowicz BS, et al. Treatment of periodontal disease and the risk of preterm birth. NEJM 2006;355:18.

For More Information

In June 2006, the New York State Department of Health released the nation's first comprehensive set of Practice Guidelines for medical and dental providers. The guidelines were established through the cooperative effort of a multidisciplinary work group. To obtain a copy of the *Oral Health Care During Pregnancy and Early Childhood Practice Guidelines*, please contact Mary E. Foley at ***mfoley@cdhp.org*** or Jayanth Kumar, DDS, MPH, director of Oral Health Surveillance and Research, New York State Department of Health, at ***atjvk01@health.state.ny.us***.

For additional information on perinatal and infant oral health, please visit ***www.cdhp.org/Projects/PPMCHResources.asp***.

2007 TEN UNDER 10

For the third consecutive year, the JOURNAL OF THE MASSACHUSETTS DENTAL SOCIETY, in conjunction with the MDS Standing Committee on the New Dentist, is shining the spotlight on 10 member dentists who have been in the profession for 10 years or less—"The Ten Under 10."

The honorees were surveyed about the many different and sometimes challenging aspects of the profession that the new dentist faces on a daily basis. These dentists have generously shared their experiences on everything from how to balance work and family, to the importance of gaining patients'—and colleagues'—trust, to the importance of staying involved in organized dentistry.

Congratulations to this year's Ten Under 10—the future of professional dentistry.

To qualify for selection as a Ten Under 10, dentists must have graduated from dental school in the past 10 years and have made a significant contribution to the profession, their community, or organized dentistry. A call for nominations was sent to MDS member dentists in September (nominees are required to be current MDS members), and nominations were reviewed and final selections were chosen by the MDS Standing Committee on the New Dentist in December.

Brian P. Chuang, DMD, MSD

RESIDENCE: Somerville
OFFICE LOCATIONS: Peabody and Lynn
SPECIALTY: Endodontics
EDUCATION: Boston University School of Dental Medicine; National Institutes of Health, and Boston University School of Dental Medicine (MSD, CAGS)

Why did you choose dentistry as a career?
I have always liked working with my hands. Dentistry combines aspects of art and science, both of which interest me. I feel very fortunate that I am in this profession because I really enjoy being a dentist.

What was the biggest challenge/obstacle you experienced when you began your professional career?
Not having enough time in the day to do everything that I wanted to do.

What has been the biggest reward, professionally, personally, or both, that you have experienced since you left dental school?
The feeling that I really am helping others is the biggest reward. There's something very gratifying about being able to calm patients down and provide the treatment so that their dental health improves. Last week, one of my patients informed me that she wrote to the *Oprah Winfrey Show* to compliment me because I completely changed her perspective about root canal treatment. She wants Oprah to tackle dental phobia on her show.

What advice would you give to a student graduating from dental school this year?
First, thank those people who helped you get to where you are in life. Second, give back to the community. During my residency, I founded and organized a conference, Advanced Programs in Clinical Endodontics Symposium (APICES), which is a three-day educational and social seminar for all endodontic residents in the United States and Canada. It took a lot of time to raise the funds for this symposium, but we were able to pay for the room and board for all 170 residents, representing approximately 30 endodontic programs in the country. APICES is now rotating throughout dental schools across the United States on an annual basis, and the American Association of Endodontists has become the official platform to ensure that this conference continues. I think that it's important to contribute back to dentistry.

How do you balance your professional and personal lives?
As new dentists starting out in our careers, we find that time seems to disappear very quickly, and there is not enough time to catch up in life. It is important to set aside time for ourselves, as well as for our friends and family.

Where do you see yourself in 10 years?
I see myself continuing to take pleasure in being an endodontist. And hopefully, I will still be able to continue my hobby of songwriting. ■

Joy E. Kasparian-Federico, DMD

RESIDENCE: Weston
OFFICE LOCATION: Medford
SPECIALTY: Orthodontics
EDUCATION: Tufts University School of Dental Medicine (DMD and Certificate in Orthodontics)

Why did you choose dentistry as a career?
Initially, I was drawn to dentistry because my father was a dentist. I began working in his office during middle school, and those early recollections made a lasting impression. I was able to see first-hand how much my father loved his job. He derived tremendous satisfaction from making his patients look and feel better. He also enjoyed a nice balance between his work and family life. Those aspects of the dental profession still appeal to me. I love coming to work every day, treating patients, and having a positive impact on people's lives.

What was the biggest challenge/obstacle you experienced when you began your professional career?
I faced the challenge that I think all young dentists face: transitioning between a student practice and a professional practice. Orthodontic residents treat only a few patients a day, while most orthodontists often see 40 to 50 patients a day. Young dentists need to learn to practice efficiently, while continuing to provide excellent quality of care. Also, because orthodontists often treat young people, there is the additional challenge of learning to convey treatment plans to both the patient as well as his or her parents.

What has been the biggest reward, professionally, personally, or both, that you have experienced since you left dental school?
Ultimately, the greatest reward I experience is enjoying my work. It is satisfying to improve my patients' occlusion (and hence their functionality) as well as their appearance.

What advice would you give to a student graduating from dental school this year?
I think it is important for young dentists to work in a practice where they have good mentors and where they will have significant responsibility for patient care. I have been fortunate to work with some very talented dentists who mentored me and helped me build my professional skills. After young dentists have established clinical proficiency, I would encourage them to begin building equity in a practice as soon as possible.

How do you balance your professional and personal lives?
I focus on my patients when I am at the office and I focus on personal matters when I am not at work. When emergencies arise, my patients' needs have to come first, and I am flexible in terms of my personal schedule.

Where do you see yourself in 10 years?
I hope that I am continuing to build my orthodontic practice. I would also like to have the opportunity to teach and mentor dental students and young dentists as they move down the path toward fulfilling careers. ■

Polly Sue Nichols, DDS

RESIDENCE: South Lancaster
OFFICE LOCATION: South Lancaster
SPECIALTY: General Dentistry
EDUCATION: Loma Linda University

Why did you choose dentistry as a career?
I recognized the satisfaction that it afforded my father, and I realized that I am very much like him. We like to use our hands and we enjoy helping people. Being able to relieve pain and provide the lasting values of comfort, function, and esthetics is tremendously rewarding. Additionally, I wanted a profession that I could take with me anywhere in the world and be of service. I have not been disappointed.

What has been the biggest reward, professionally, personally, or both, that you have experienced since you left dental school?
For me, the greatest reward in dentistry is the trust of my patients. Another very nice moment was learning that one of the ethics articles I lead-authored had won a national dental journalism award.

What was the biggest challenge/obstacle you experienced when you began your professional career?
The most immediate frustration was my lack of clinical speed. Everything seemed to take so long! But I have been blessed to be able to join my father's practice—a place where I have been personally and professionally nurtured.

What advice would you give to a student graduating from dental school this year?
The best advice I can offer is to find a dentist who will give freely of himself or herself to mentor you in the twin journeys of clinical and interpersonal excellence.

How do you balance your professional and personal lives?
I have tipped the balance in favor of my personal life in order to focus on my greatest priorities: my husband, Timothy, and our children, Summer Rose and Ethan. I see patients only two days per week and have streamlined other commitments that would interfere with my mothering responsibilities. For example, when Ethan was born I resigned from writing the ethics column in *General Dentistry*. Dentistry will always be with me, but my children will someday grow up and move away.

Where do you see yourself in 10 years?
Still practicing on a limited scale with my dad and my brother (he joined us when he graduated LLU in 2005), teaching my children at home (prepping them for the Dental Admission Test!), and beginning to find time to reenter the world of dental ethics and/or dental education. ■

Lokesh Suri, DMD, MS

RESIDENCE: Boston
OFFICE LOCATION: Boston
SPECIALTY: Orthodontics
EDUCATION: Tufts University School of Dental Medicine; All India Institute of Medical Sciences, New Delhi, India (Certificate in Prosthodontics)

Why did you choose dentistry as a career?
I always had a fascination for the arts and dabbled in oils as a youngster. I made a few portraits and found that trying to paint the teeth was the hardest part (and remains the most difficult for me even today). That was probably when I started to observe people's teeth. During my high school years, I spent a summer working at my uncle's multispecialty dental practice. I was exposed to everything from carving wax set-ups for dentures and try-ins to orthodontic adjustments and retainers. Each procedure was like a painting or piece of art in progress. The dexterity and detail that dentistry requires really appealed to me—it was the perfect mix of art and science.

What was the biggest challenge/obstacle you experienced when you began your professional career?
Time management. The challenge for me each day is to create my own time machine and handle activities that would squeeze 48 hours into 24 hours. Sometimes I succeed, and sometimes I do not.

What has been the biggest reward, professionally, personally, or both, that you have experienced since you left dental school?
If it were not for orthodontics I would not have met my wife, who is a fellow orthodontist. So that is the biggest reward personally. Professionally, the greatest reward has been gaining the gratitude and respect of the patients I treat.

What advice would you give to a student graduating from dental school this year?
My advice would be threefold: First, read contracts carefully and ensure that you reap the benefits of your education. Second, do not just draw on current knowledge; contribute to it so that you can evolve professionally. Then, share that knowledge with students and peers. Finally, commit to propelling the profession forward by being involved in a sphere of your choice—teaching, dental politics, or a very high-quality practice.

How do you balance your professional and personal lives?
Remember the time machine!

Where do you see yourself in 10 years?
I see myself in private practice working with newer techniques. By that time, nanotechnology will probably have found routine applications in dentistry. I also see myself in academia with students and some very significant research under way. ■

Viktoria P. Talebian, DMD

RESIDENCE: Swampscott
OFFICE LOCATION: Salem
SPECIALTY: Orthodontics
EDUCATION: Boston University School of Dental Medicine (DMD, CAGS in Orthodontics)

Why did you choose dentistry as a career?
Dentistry intrigued me because it gave me an opportunity to combine my artistic, expressive side with my practical, academic, science-minded side. Orthodontics has been a fantastic specialty because of my eager, youthful, and appreciative patient base. We really have an opportunity to make a difference in the quality of someone's life.

What was the biggest challenge/obstacle you experienced when you began your professional career?
It took me some time to figure out what direction I wanted to pursue. I loved academics, for the benefit of sharing what you know is powerful. For the first few years, I split my time between holding a faculty position at a dental school and working in private practice. The private practice experience has been challenging in a different way. It forces you to really examine who you are and what you believe in and how those values will translate into a practice philosophy that you can use to guide your treatment and interactions with patients, staff, and colleagues.

What has been the biggest reward, professionally, personally, or both, that you have experienced since you left dental school?
For me, the joy of marrying my husband and now raising our three children together is the ultimate reward. Especially as a mother, I feel I am able to connect with my families on a more personal level, understanding more readily some of the challenges they face, and hopefully this has made me a more caring and supportive clinician.

What advice would you give to a student graduating from dental school this year?
Try to figure out as early as you can what your core values are and how they will guide all that you do both personally and professionally. Then, try to surround yourself with a working environment that fosters those values and challenges you to be the best you can be on a daily basis.

How do you balance your professional and personal lives?
I feel that it is critical to have some outlet, whether it is a hobby, volunteering at a community service organization, or just an hour working out at the gym. It is important to have a perspective on the bigger picture of life and what you want out of it and to never let the details, the demands, and the overscheduling consume you.

Where do you see yourself in 10 years?
I will still be a mom, a wife, and an orthodontist. Making a difference in the lives of others, whether being there for my kids at their soccer games or giving an adolescent patient the confidence to smile brightly—these are the things that are most meaningful. ■

Lakshmi P. Thalanki, DMD, MS

RESIDENCE: Wellesley
OFFICE LOCATIONS: Cambridge and Hudson
SPECIALTY: Orthodontics
EDUCATION: Boston University School of Dental Medicine

Why did you choose dentistry as a career?
I always wanted to be a doctor and to help people improve their health. Dentistry was more appealing to me, as I could balance my professional and personal lives, yet still have an impact on people's lives.

What was the biggest challenge/obstacle you experienced when you began your professional career?
I purchased an existing practice within a year of graduating from my orthodontic program and while I was expecting my second child. The most challenging part was to balance my new practice and my personal life. It was also a great challenge to learn how to run the business end of a dental office, versus just practicing orthodontics. Learning how to interact with staff members much older than I am, with parents, and with referring dentists who were sometimes leery of such a young specialist, challenged me to be my best. I worked to provide both excellent results and a great experience to my patients to gain their confidence and support. All these experiences helped me tremendously when I bought my second practice, although each practice is different.

What has been the biggest reward, professionally, personally, or both, that you have experienced since you left dental school?
I really enjoy when a patient who had been so embarrassed to smile before is happy with his or her smile and says, "I can't stop smiling now." It is very rewarding to give patients that self-confidence and self-esteem. It is nice to know that we dentists can make a difference in others' lives, one smile at a time.

What advice would you give to a student graduating from dental school this year?
Treat all your patients like your own self or like your own child. Always keep the patient's best interest in mind. Success will follow when you are honest and truthful. Never stop learning, always look for more ways to improve your knowledge, skill, and techniques. Be involved in organized dentistry and your community.

How do you balance your professional and personal lives?
I have a son (age 8) and a daughter (age 4) who help me to keep my focus on life. Good communication with your loved ones helps a lot to keep balance. Fortunately, I have a wonderful and supportive family who encourage me to achieve both personal and professional goals. The most important thing is to be happy and appreciative of what you have.

Where do you see yourself in 10 years?
Professionally, I see my practice continuing to flourish, as I embrace new technology and keep my offices on the cutting edge with all the advances in orthodontics. I will continue to be more involved in the MDS and in academics. Personally, I see myself continuing to enjoy life with my family and friends. ■

Justine Tompkins, DMD

RESIDENCE: Burlington
OFFICE LOCATIONS: Concord (private practice on the weekends) and Hanscom Air Force Base (active duty working at the base clinic during the week)
SPECIALTY: General Dentistry
EDUCATION: Harvard School of Dental Medicine; United States Air Force (AEGD)

Why did you choose dentistry as a career?
I chose the field of dentistry because I love working with people, and, more importantly, I love helping people. I also enjoy working with my hands. Dentistry appealed to me because of the continuity of care I would have with patients and the prospect of treating a patient and his or her family for many, many years.

What has been the biggest reward, professionally, personally, or both, that you have experienced since you left dental school?
My biggest reward has been the individual impact I have on patients, whether calming an anxious patient, treating a child, or making someone want to smile again, as well as the impact each patient has on me. I learn something new from every case and every patient. I have enjoyed being part of organized dentistry. Also, I recently passed the fellowship examination for the AGD, and have applied for Fellowship status—a personal goal I have been looking forward to achieving.

What was the biggest challenge/obstacle you experienced when you began your professional career?
As with many of my colleagues, the biggest challenge I first faced in practice was building my speed and efficiency when performing dental procedures. Now my challenge is staying current with new techniques and materials, as well as expanding my skills and procedures.

What advice would you give to a student graduating from dental school this year?
Continuing education is the most important thing you can do for yourself. Take as many hands-on courses as you can, and definitely consider additional training, such as an AEGD or a specialty residency program. Also, keep in mind that patients vary from being completely relaxed to extremely nervous when at the dental office. Take the time to comfort and talk to the patient. This initial discussion will go a long way, both for your patient's comfort and for the ease with which you can perform a procedure.

How do you balance your professional and personal lives?
I try to keep my life balanced by staying active in my community, volunteering, going downtown to the theater and enjoying the city, and setting aside weekend time with my family. I also try my best to stay physically fit because I find when I work out regularly, I have more energy and am better able to face challenges.

Where do you see yourself in 10 years?
I see myself practicing dentistry in a small community, being active with the MDS, and enjoying my family. ■

Carlene Tsai, DMD

RESIDENCE: Reading
OFFICE LOCATIONS: Danvers and Salem
SPECIALTY: Endodontics
EDUCATION: Harvard School of Dental Medicine; University of Texas Health Science Center at San Antonio

Why did you choose dentistry as a career?
I was initially drawn to dentistry because of my background in microbiology and the opportunity to treat patients on a personal level. Dentistry allows me to pursue the areas of skill and accomplishment that I value most. This includes the requirement for scrupulous attention to detail, the necessity of carefully controlling the environment, the challenge of problem solving each unique case, and the reward of helping patients. When addressing dental issues, one develops an awareness and appreciation for the fact that oral problems can affect people's overall health and well-being.

What was the biggest challenge/obstacle you experienced when you began your professional career?
Initially, the biggest challenge I had when I started to practice was being asked if I was old enough to practice. Being petite and having a young appearance surprised some of my patients. However, by introducing myself, diagnosing their problem, and projecting my interest in making their experience as pleasant and pain-free as possible, I alleviated their concerns.

What has been the biggest reward, professionally, personally or both, that you experienced since you left dental school?
One of the reasons I chose endodontics was so that I could have the ability to relieve pain for patients who have been in acute discomfort. After a successful treatment, it is the patient's gratitude that makes the profession worthwhile and enjoyable for me.

What advice would you give to a student graduating from dental school this year?
Stay current with the latest literature and practices. In dental school, we were constantly introduced to new techniques and materials as we learned the art. However, in private practice it is easy to rely on what we've previously learned. It is important to be informed of the current research and to attend continuing education courses, as the practice of dentistry is constantly evolving.

How do you balance your professional and personal lives?
I've been fortunate to have a supportive husband who helps me balance work with caring for our 2-year-old daughter. I have learned that it is important to communicate priorities and respect each other's needs. This applies not only at home, but also working with staff in order to make the daily routine run as smoothly and efficiently as possible.

Where do you see yourself in 10 years?
I plan to continue to grow my practice and stay attuned to the latest clinical techniques. My hope is to continue to stay involved in organized dentistry and to play an active role in our local dental society. Finally, I'd like to give back to the education and foundation I have received by volunteering at Harvard School of Dental Medicine. ■

Eric Weinstock, DMD, JD

RESIDENCE: Needham
OFFICE LOCATION: Canton
SPECIALTY: Endodontics
EDUCATION: Tufts University School of Dental Medicine (DMD, Endodontics Certificate); University of Virginia School of Law (JD)

Why did you choose dentistry as a career?
Dentistry is a wonderful field. It affords me the unique opportunity to enjoy the various roles of healer, educator, and small business owner, all in a day's work.

What was the biggest challenge/obstacle you experienced when you began your professional career?
The biggest challenge was adjusting to the business aspects of starting a solo practice from scratch. I was fortunate to have great clinical training while at Tufts University School of Dental Medicine, but learning to manage my staff and handling the rigors of running a business, especially in the beginning, was my greatest challenge.

What has been the biggest reward, professionally, personally, or both, that you have experienced since you left dental school?
My biggest reward by far is that my wife and I are fortunate to have had three beautiful children since I graduated from dental school. Starting my own practice and heading the ethics program at Tufts have both been extremely rewarding professionally, but being a dad three times over takes the cake.

What advice would you give to a student graduating from dental school this year?
The financial pressures facing new graduates are greater than ever. Despite these pressures, no matter in which direction a new graduate goes, whether it's academia, residency, or private practice, the integrity brought to each pursuit should never be compromised. What will set you apart in the eyes of your patients and your colleagues alike will be the ethical standards you abide by in the care you provide.

How do you balance your professional and personal lives?
One of dentistry's finest attributes is that it affords its practitioners the ability to balance their professional and personal lives. Few fields allow for such autonomy of practice. Learning to leave work issues at the office—which is easier said than done—allows for a much more fulfilling personal life.

Where do you see yourself in 10 years?
In addition to private practice and teaching ethics at Tufts, I will continue to explore opportunities in dental higher education and organized dentistry. ■

Janice Yanni, DMD

RESIDENCE: Longmeadow
OFFICE LOCATIONS: West Springfield, MA, and Ellington, CT
SPECIALTY: Orthodontics
EDUCATION: Case Western Reserve University; University of Pittsburgh (Certificate in Orthodontics and Dentofacial Orthopedics)

Why did you choose dentistry as a career?
I am the third member of my immediate family to choose dentistry as a career. After experiencing firsthand the rewarding impact dentistry had on my older siblings, I decided to apply for dental school. We all attended the same dental school and shared several professors and many challenges. I decided to further my dental education and chose orthodontics as a specialty. To me, there is no better profession. I treat both children and adults, and it is truly rewarding to see how a smile can transform someone's life.

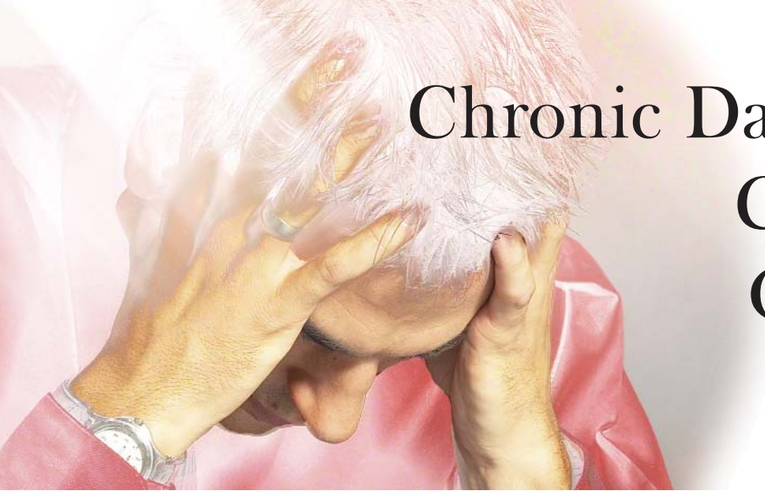
What was the biggest challenge/obstacle you experienced when you began your professional career?
Upon graduating from my orthodontic residency in 2002, I decided to open up two private orthodontic practices. From an orthodontic perspective, I felt confident in my ability to straighten teeth. However, from a business perspective, did I have a lot to learn! It has been an exciting headache, from designing an office, to hiring staff, to growing a practice, and to managing a true business. The clinical aspect is the most rewarding and the business aspect is the most challenging.

What has been the biggest reward, professionally, personally, or both, that you have experienced since you left dental school?
The biggest rewards have been to be blessed with an amazing, supportive family and to have the ability to practice orthodontics. Dentistry and orthodontics are a long haul—financially and emotionally—and to have the support of loved ones throughout both the good and the bad times is invaluable. Orthodontics is such a rewarding profession. For a large percentage of my patients, I literally get to see them mature into young adults.

What advice would you give to a student graduating from dental school this year?
Pay more attention to those 8 a.m. business courses.

How do you balance your professional and personal lives?
That's the beauty about my specialty: I can live a balanced life quite easily. I have regular business hours and the nature of orthodontics does not have many emergencies. While my day is spent seeing a lot of patients, we truly have a great time. I am so fortunate to have such a wonderfully supportive husband and immediate family.

Where do you see yourself in 10 years?
Where I am right now. While I would love to expand my private practices from two offices to four, I will never get too caught up. I strive with my staff to create a unique experience for my patients. No matter how many patients come through my doors, I make it a point to treat every single one of those patients. No matter how large my practice or practices become, I will always provide the personal and individualized attention my patients deserve. ■



Chronic Daily Headache: Case Report of One Subgroup

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Chronic daily headache (CDH) is a heterogeneous group of disorders with the primary symptom being persistent head pain of at least four hours' duration for more than 15 days per month, not related to structural or systemic disease.[1-3] CDH is not currently included as a discrete diagnosis in the 2004 International Headache Society (IHS), International Classification of Headache Disorders II (ICHD II); however, revision to the classification to define CDH has been recently suggested.[4] At present, CDH includes the diagnosis of chronic migraine (CM), chronic tension-type headache (CTTH), new daily persistent headache (NDPH), and/or hemicrania continua (HC). All of these are often subcategorized in conjunction with medication overuse (with and without medication overuse).[5]

According to recent population studies, CDH affects approximately 4 percent to 5 percent of the general population worldwide.[1] Individuals with CDH are most likely to present to major academic tertiary care specialized pain centers (approximately 40 percent), have a lower quality of life, and are associated with significant comorbidity and considerable disability.[6,7]

We present a case of a patient with CDH for many years, confounded by numerous trials of preventive medications, medication overuse, and comorbid psychiatric disease. The patient was evaluated and treated in an interdisciplinary approach to complex head, face, and neck pain.

Case Report

A 66-year-old male was referred to the Craniofacial Pain Center with the chief complaint of "complex headaches." He stated that the headaches started 20 years prior while he was teaching at a university. There was no apparent trigger and the headache subsided after several hours. At that time, his headaches were a rare occurrence, only several per month. The patient described these headaches as pressing with tightness in the back of the head, like "wearing a tight band." Pain was experienced as beginning at the back of the neck and radiating forward to the frontotemporal region.

Five years ago, the headaches began to show an increasing frequency. Typically, a headache would start at the base of the skull and radiate toward the temple region. The headaches seemed to occur more often during the afternoon, sometimes accompanied by neck pain. The patient reported sensitivity to noise during a headache episode. Any kind of mental stress tended to make the headaches worse, while sleep, medications, and ice application at the back of the neck helped to alleviate them. Occasionally, pain radiated to the side of face, bilaterally.

The patient was referred to a neurology center, where he was diagnosed with migraine without aura. The patient had medication trials of propanolol (Inderal), nortriptyline (Pamelor), divalproex (Depakote), lamotrigine (Lamictal), and verapamil (Calan). Also, rizatriptan (Maxalt) and zolmitriptan (Zomig)—18 per month—were prescribed as migraine-abortive medications. These medications were not considered effective.

The patient was subsequently prescribed Midrin as a migraine-abortive medication, which he reported to relieve his headaches. Over time, however, the patient's headache would recur and require additional Midrin dosages to obtain a lasting relief. Eventually, the patient was taking 10 to 12 Midrin tablets per day. Headache was now a daily occurrence.

At that time, the patient was diagnosed with CDH, presumably transformed migraine-type. At this time, a trial of Zyprexa was proposed to the patient. He decided to have a second opinion. In 2004, he had a brain and neck MRI, MRA, EEG, and panoramic radiograph of the maxillofacial skeleton, which did not show any abnormality.

On the Visual Analogues Scale (VAS)—where 0 = no pain and 10 = the most severe pain experienced—the patient rated his headache as 8 out of 10, neck pain as 8 out of 10, and face pain as 2 out of 10. He also rated eye sensitivity to light as 4 out of 10.

The patient's past medical history includes psoriatic arthritis in his fingers, diverticulitis, right rib fracture, iron deficiency anemia (iron levels are normal currently), and stress-triggered complex tension-type headaches. His psychological history includes attention deficit hyperactivity disorder (ADHD), dyslexia, and depression. He had been under the care of a local pain management group for the past few years.

At the time of his initial consultation at the Craniofacial Pain Center, his medication included:

- Midrin (isometheptene mucate USP, 65 mg; dichioraiphenazone USP, 100 mg; and acetaminophen USP, 325 mg): 10 to 12 tablets per day for headaches
- Tylenol (acetaminophen USP), 325 mg: 2 tablets approximately three times a day for headaches
- Skelaxin (metaxalone), 800 mg: once a day for headaches
- Oxycodone, 5 mg: as needed (usually 10 per month) for severe headaches
- Effexor XR (venlafaxine extended release), 225 mg: once daily for depression
- Ritalin (methylphenidate), 30 mg: once daily for ADHD
- Ativan (lorazepam), 0.5 mg: 2 to 3 per day for anxiety
- Mobic (meloxicam), 15 mg: once daily for arthritis

On physical examination, there was no facial asymmetry. There was a marked forward-head posture with mild stiffness evident during the range of motion of the neck with mild pain. There was tenderness to palpation in the trapezius muscle, posterior cervical musculature, and occipital base. There was tenderness of the masticatory muscles, including bilateral temporalis and masseter muscles, intraoral temporalis tendon insertion on the coronoid process of the mandible, and lateral pterygoid muscles bilaterally.

The range of motion of the mandible was normal with a maximal opening of 45 mm. Oral examination revealed a dental malocclusion (Angle Class 2, Division I type), with an overbite of 50 percent and overjet of 9 mm (see Figure 1). The mandible exhibited a shift posteriorly after contacting the anterior teeth upon closing. The vertical dimension of occlusion was decreased. The teeth exhibited numerous wear facets that suggest the occurrence of mandibular parafunction. Examination of the cranial nerves was normal. There was no trigeminal neurosensory deficit, hyperesthesia, or allodynia.

The patient was given the following diagnoses:

- Medication-overuse headaches due to excessive use of Midrin and Tylenol
- Chronic tension-type headaches associated with pericranial tenderness
- Myofascial pain in facial and cervical region

Treatment recommendations included:

- Decreased usage of Midrin and Tylenol gradually over a period of three months
- Intraoral occlusal orthopedic appliance
- Acupuncture treatment (as physical medicine)

The intraoral appliance was fabricated on the mandibular teeth from vacuum-pressed acrylic material. Self-cure acrylic was added in the premolar and molar regions of the appliance to increase the vertical dimension with multiple even-holding contact-area points. (See Figures 2-4.)

Figure 1. Maximum intercuspation.

Figure 2. Occlusion with appliance. Notice the change in vertical dimension relative to Figure 1.

Figure 3. Appliance (left side). The maxillary teeth made point contacts (about three contact points) with the appliance on either side.

Figure 4. Right-side view of intraoral appliance fabricated on the mandibular teeth from vacuum-pressed acrylic material.

Figure 5. Acupuncture as physical medicine, shown here as needles in neck.

Figure 6. Acupuncture needles in hands.

Figure 7. Acupuncture needles in feet.

One week after inserting the intraoral appliance and the first acupuncture session, the patient returned with pain levels of 1 out of 10 on the VAS scale for head and neck pain, decreased sensitivity to light, and 0 out of 10 level of face pain. He stopped taking Midrin on the day he received the intraoral appliance and the first acupuncture therapy session. After four weeks of treatment, he replaced the acetaminophen with 100 mg of aspirin once a day for mild pain. The patient was still using Oxycodone as a rescue medication. Since the start of the treatment, he had reduced the frequency of use to approximately once every two weeks for severe headache.

He returned weekly for four sessions of acupuncture (see Figures 5–7) and occasional adjustment of the intraoral appliance. Three months after initiation of treatment, there was a maintained pain level of 0–2 out of 10 on the VAS scale for head and neck pain and 0 for face pain. At four- and six-month follow-ups, the patient was free from his daily headaches and continued to have a headache approximately once every seven to 10 days, which he continues to treat successfully with aspirin or Oxycodone.

Discussion

The complex anatomy of the head and neck region often makes the diagnosis of chronic headaches and other craniofacial pain disorders difficult and challenging. The clinician must thoroughly evaluate all the physically affected areas and all the concomitant cofactors that may play a role in chronic pain disorders. A comprehensive evaluation of the craniofacial complex with attention to the stomatognathic system should not be overlooked. Aggressive early interdisciplinary therapy may be necessary and often is mandatory with chronic disorders, refractory to standard headache treatments. In addition to pharmacological therapy, other comprehensive pain management strategies should be considered, including those that address and assist in restoring the physical, emotional, and psychosocial—the mind-body environment.

Multiple factors can play a role in the pathogenesis of chronic headache disorders. Genetic predisposition, psychological dynamics, medication misuse, cervical mechanics, the masticatory apparatus, trigeminal system disorders, and social factors have all been implicated in the production of CDH.[8] Failure to address these factors may be a source of potential treatment failure and refractory headache pain patterns.

This patient came to our center with a diagnosis of migraine, but a detailed interdisciplinary evaluation of this patient depicted a headache disorder (CDH) possibly originating in the facial and cervical muscles and with several other confounding cofactors. At the request of both the patient and his wife, mainly nonpharmacological treatments were prescribed.

While there is still debate as to whether analgesic overuse is a cause or a consequence of CDH, it seems apparent that withdrawing patients who have been maintained for long periods from several specific types of short-acting analgesics remains prudent practice.[9,10] For the medication overuse, detoxification withdrawal and behavioral interventions were initiated. Although very gradual medication withdrawal was recommended, the patient ceased taking Midrin and Tylenol immediately. No interventions regarding withdrawal symptoms from the medications were required, as the patient did not exhibit any adverse effects on discontinuing the medication.

Headaches can actually be generated from the bony and soft-tissue structures of the face and neck. Temporomandibular diseases can cause myofascial pain, which in turn may cause headache, especially during activity of the mandible.[11] Tataroglu et al. concluded that an altered activity of bulbar inhibitory interneurons may be playing the same role in myofascial pain and primary headaches as in migraine and tension-type headache.[12]

As described above, CDH can be different types of headache disorders occurring daily, of which CTTH is common.[13] In CTTH, the pain is bilateral, pressing or tightening in quality and of mild to moderate intensity, and it does not worsen with routine physical activity. There may be mild nausea, photophobia, or phonophobia. In CTTH associated with pericranial tenderness, there is often associated pain and muscle tenderness of the masticatory muscle system.[4]

Temporomandibular disorders (TMD) are a category of orofacial pain disorders that affect the temporomandibular joint, muscles of mastication that control jaw movement and associated muscles and soft tissues of the head and neck.[14] There are numerous categories of TMD, of which myofascial pain disorder is the most common form and has a similar clinical appearance to that of CTTH associated with pericranial tenderness. Recent studies have demonstrated that migraine and other headache disorders are more common in orofacial pain populations.[15]

The intraoral appliance was utilized to increase the vertical dimension of occlusion in order to reduce pain in the craniomandibular musculature.[16] In addition, an increased vertical dimension of occlusion has shown to decrease pain originating from the cervical musculature.[16,17] Disoccluding the teeth will presumably eliminate functionally disturbing sensory feedback from the dentition, reduce mandibular parafunctional habits, and thereby ensure an optimum form-function relationship of the maxillomandibular complex. Since the maxillomandibular complex participates in the control of head position, any functional disturbance in it will be reflected in the function of reciprocating muscles on the opposite side of the cervical spine.[17]

Conclusion

In conclusion, there are patients with CDH who meet the criteria for chronic tension-type headache. These patients commonly present with medication overuse. It is necessary to discontinue the offending medication prior to diagnosing the underlying chronic headache condition, according to the IHS criteria for classifying headaches. This patient, after discontinuing Midrin, quickly responded to intraoral appliance therapy and acupuncture, which are conservative treatments for musculoskeletal pain or for chronic tension-type headache with pericranial tenderness.

We recommend that this treatment sequence and regimen be considered in patients in the subgroup of CDH with chronic tension-type headache with pericranial tenderness. ■

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Using the Microscope in Conventional Endodontic Treatment

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Innovations in endodontic technology have been responsible for many revolutionary changes that have occurred over the last 10 to 15 years. Improved instrumentation and obturation products used judiciously have elevated the quality of root canal therapy. While these advances represent improvements over preexisting systems, the surgical operating microscope (SOM) has, more importantly, given the operator the visual opportunity to achieve outcomes that otherwise were previously impossible to accomplish or that may have resulted in a reduced prognosis.

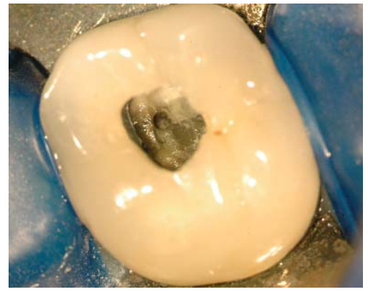
Tactile dexterity is a required skill necessary for excellence in treatment, but it has limitations. While some have said, "you can't treat what you can't see," we know that our fingers can negotiate files into spaces we cannot see. When manual dexterity is combined with visual ability, the results can be extraordinary.

The SOM was introduced in 1981 by Apotheker[1,2] but did not gain widespread acceptance because it was poorly configured and ergonomically difficult to use.[3] In 1992, Gary Carr introduced an ergonomically configured microscope for endodontics[4] and started training endodontists in its use at his Pacific Endodontic Research Foundation in San Diego, California. As Carr stated, "The operating microscope provides the ability to have commanding visual control over the operating field." The practice of endodontics has never been the same, as most who have used it would agree that it has elevated the standard of care to a much higher level. There are now training facilities to educate dentists in not only endodontics, but in restorative and periodontal surgical techniques worldwide.

The SOM generally operates in a magnification range of 3× to 32×, utilizing a halogen or xenon coaxial light source (parallel to the line of sight). While I have tried loupes up to 4.5× with supplemental light sources, there is no comparison to the SOM. One is immediately brought into the pulp chamber and any straight-line view into a canal with intimate visual acuity.

The SOM provides the ability, through nonaggressive access openings, to discern subtle differences in color changes of tooth structure that become the necessary road map for discovering anatomical structures harboring the source of current and future pathology. Simply said, many canals cannot be located without this microscope. One cannot merely look at an X-ray and tell if its use may be indicated, as many canals cannot be seen radiographically.

With the SOM, complexly shaped canals can be more easily obturated; posts and separated instruments can be more easily removed; cracks, canal cleanliness, and microleakage (through the use of a caries detector) can be seen; and biological and mechanical defects such as resorptions and perforations can be repaired.



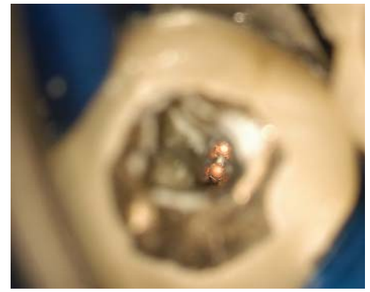
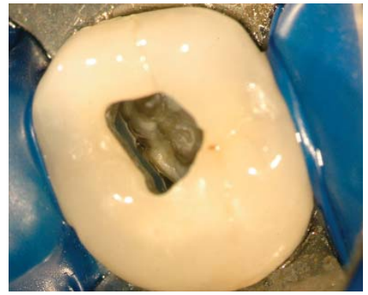
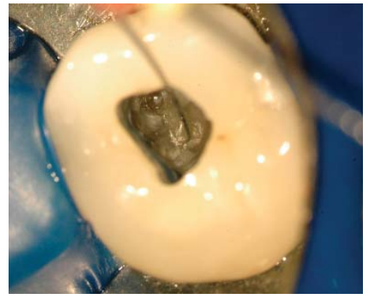


Figure 1. After locating the MB1 canal, incremental drilling of the chamber floor reveals the MB2 orifice.





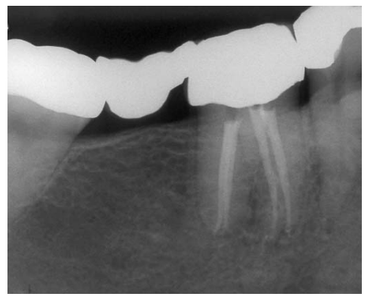


Figure 2. The SOM shows the obturation of a figure-8-shaped distal canal that bifurcates close to the apex.

Figure 1 shows that with a minimally invasive opening, the user is brought into intimate visual contact with the chamber floor. When dealing with the MB root of maxillary molars, one has to assume the presence of a second canal unless proven otherwise[5] and that in approximately one-third of the time it is located below the chamber floor.[6] By observing color changes in dentin, one can successfully locate canals which would otherwise not be found.

Figure 2 shows the obturation of a figure-8-shaped distal canal that bifurcates close to the apex. The user is brought so close to the operating field that the value of this technology cannot be denied.

Figure 3 shows the presence of a crack along the chamber floor of tooth #2. Patients want to know if we have seen or encountered anything during treatment that may influence the prognosis. Addressing potential problems from the start goes a long way in dealing with disappointment in the future.

Figure 4 shows a retreatment performed on tooth #30 that was previously treated in Japan. After an access opening over the mesial root, round burs and ultrasonics were used to remove the resin around the large screw post in the MB

Figure 3. The arrow points to a crack on the chamber floor.

canal. The post was counterrotated with the Ruddle Post Removing Kit and the canal was negotiated to the apex with some degree of difficulty. There was no obturating material in the ML canal and I was able to get no further than what was previously instrumented. The SOM revealed an isthmus between both canals which was entered with an 08 file and negotiated to the apex. With enhanced vision a precise opening was employed to enter the mesial root canal system and the connection between both canals was easily observed. The treatment of the mid-mesial canal in lower molar endodontic therapy has become part of our mindset in treating these teeth.

These cases are just a few examples of how the SOM can enhance the practice of endodontics. It is the position of the American Association of Endodontists that "microscopes create the very necessary environment endodontists need to be meticulous and uncompromisingly thorough in their treatment."[7] I would strongly encourage anyone performing endodontic treatment to take a course and see how this technology can enhance his or her ability to optimize patient care. ■

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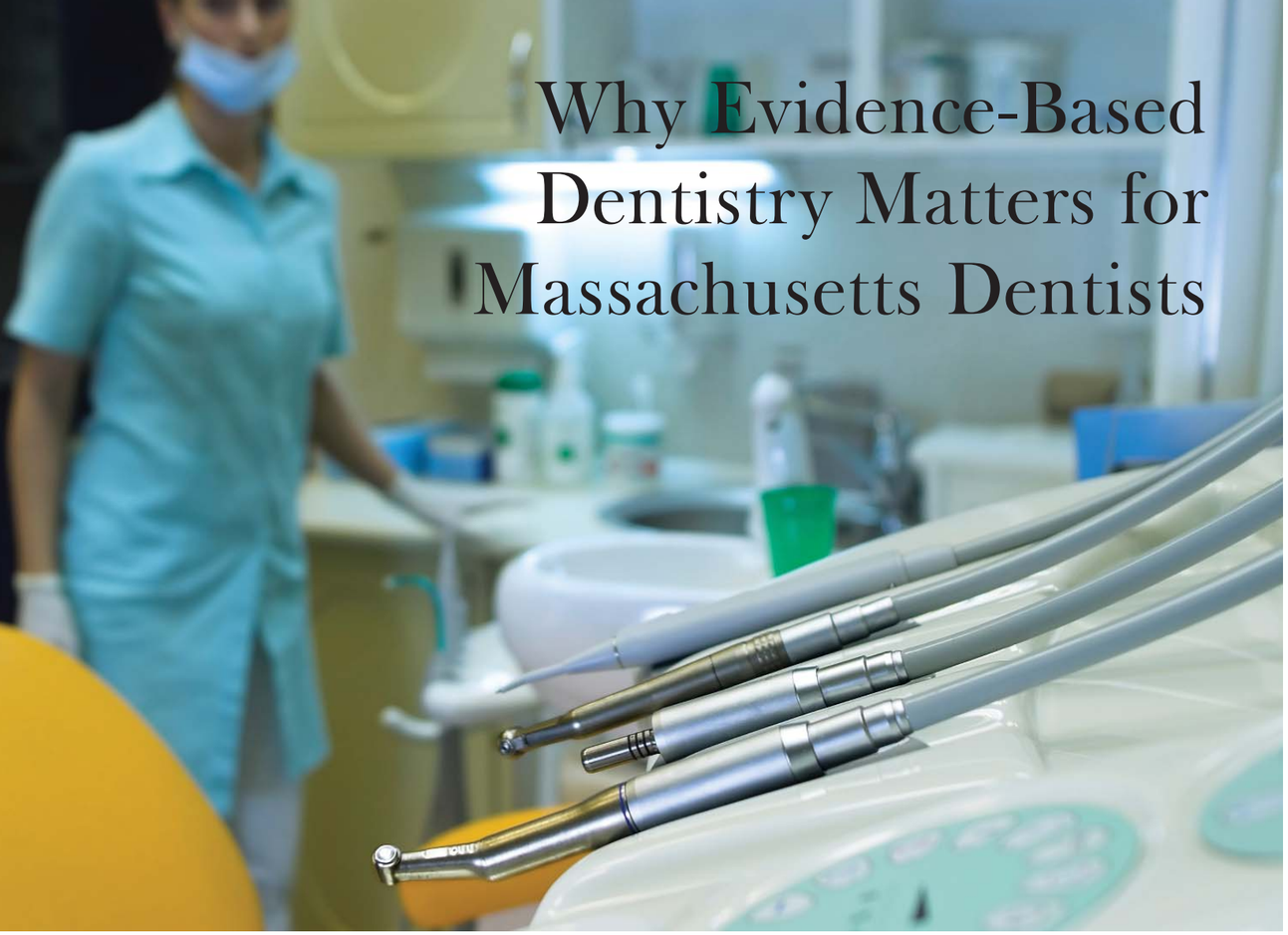
Figure 4. The SOM is used to retreat and locate the mid-mesial canal in tooth #30.



Why Evidence-Based Dentistry Matters for Massachusetts Dentists

ROBERT S. LAURENZANO, DMD, FAGD, CDC
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By promoting best practices and the application of new research, evidence-based dentistry (EBD) encourages the utilization of dental advances in the everyday treatment of patients. It also encourages changes that may provide incentives to dentists to incorporate new approaches into their practices.

As dentists all over the United States, Canada, and Europe wrestle with the practical implications of EBD for their clinical practice, Massachusetts dentists have some important resources close to home—and an example of EBD at work within the state.

The Forsyth Institute's Center for Evidence-Based Dentistry in Boston is one of the premier institutions defining and exploring EBD and its treatment implications. The center's programs include demonstration projects, publications, reviews, and the creation of Internet tools focused on the proper methodology for compiling the evidence for EBD along with dissemination strategies for making that information available in a useful format for dentists.

Much of the groundwork for EBD is being laid right here in Massachusetts. Forsyth's research to build the clinical informatics necessary for an EBD approach involves collaboration with experts at Harvard School of Dental Medicine and Delta Dental Plan of Massachusetts, as well as the Tufts New England Medical Center. This local connection provides opportunities for practicing dentists in Massachusetts to take part in research activities, attend presentations by the seminal thinkers in EBD, ask questions, raise concerns, and be an active part of this paradigm shift.

Practicing dentists realize that one of the most immediate, tangible, and promising aspects of EBD is the potential for a long-overdue reevaluation within dental reimbursement plans to include procedures too new to be part of long-standing treatment protocols and insurance benefit allowances, but already proven in their effectiveness to treat or prevent disease. In 2005, Delta Dental of Massachusetts added four newly covered services to its treatment plans because of evidence-based benefits. Single-tooth implants, sealants in patients over age 15, the use of Chlorhexidine prescription mouthrinse after scaling/root planing procedures, and the use of prescription-strength fluoride toothpaste following periodontal surgery were all added to Delta Dental's coverage at no additional cost to plan members due to the weight of evidence of the services' efficacy.

Delta Dental is not the only insurer to see the potential for long-term savings through the use of proven preventive services. Aetna Dental launched a new program in March 2006 offering continuing education courses to dentists in order to promote more effective prevention and intervention. The first offering—"Cariology Update for the Dental Practitioner"—provided three CEU credits at no cost. One of the goals of that course, according to Aetna, was to help dentists be more effective in identifying children with a high incidence of caries in primary teeth, which the Centers for Disease Control links with a higher risk of caries in adulthood.

Cigna Dental and Vision began its oral health integration program in October 2005. The program's goal, according to Bruce Shutan in *Employee Benefit News*, is "to provide total health management from a holistic standpoint." The first offering in the Cigna program, according to Shutan, is focused on the link between gum disease during pregnancy and the risk of preterm birth. The new Cigna program provides 100 percent coverage without co-pays on services directly related to reducing gum disease, such as periodontal scaling and root planing. The intent, says Shutan, "is to encourage preventive care that translates into better overall health outcomes." The same article reports that Cigna is also launching similar programs focusing on patients with diabetes and cardiovascular risk. Cigna's program has also led to coverage for brush biopsy.

Conclusion

While change is always difficult, EBD's promise of better patient outcomes should ease the discomfort of adjusting long-held and familiar methods of treatment for both dental plans and dentists. In the short run, EBD may not lead to an immediate increase in reimbursement. Over time, however, as EBD achieves its goal of making new treatment modalities commonplace, a combination of consumer demand and demonstrated efficacy should bring about market pressure to reimburse those treatment methods demonstrated to produce better results. ■

Excellence at Yankee Dental Congress® 32
Sets the Tone for Yankee's Future

With nearly 28,000 attendees, Yankee Dental Congress® 32 shone with brilliance in every fashion during January 24–28, 2007. Inventive new courses, expansive exhibits, and dazzling entertainment marked the end of an era at Boston's Hynes Convention Center and raised the bar for the future of Yankee at the new Boston Convention & Exhibition Center (BCEC).

Homegrown comedian Jimmy Tingle kicked off Yankee's Opening Ceremony with a humorous take on the characteristics of New Englanders, and MDS President Dr. Alan Gold and General Chair Dr. John Herzog welcomed the crowd to YDC 32. "Brilliance will be apparent wherever you look this year," Dr. Herzog told the enthusiastic attendees. "Whether it is the scientific programs, exhibits, or entertainment, you will find the tone has been set for Yankee: excellence. That tone of excellence will continue well into Yankee's future." The night continued from the Opening Ceremony on to the Third Annual MDS Foundation's Casino Night, where attendees went "All In" to help raise money for access to care.

Looking to raise the bar, Yankee welcomed innovative courses that brought new business perspectives, such as the FISH! Philosophy and the Ritz-Carlton Leadership Program. The YDC Corporate Forums, free courses independently sponsored by several of the leading companies in the industry, were also new this year and were well received.

Yankee continued with its Third Annual Conference for Women in Dentistry on the topic of leadership and life balance, featuring businesswoman Carolyn Kepcher, the former star of NBC's *The Apprentice*. Team Development Day also returned to Yankee, but with a new and improved format that included both the dentist and the team, and the Pankey Institute was back with a program on esthetics. Also returning was the YDC-cosponsored Third Annual Specialty Symposia, which featured programs for orthodontists, periodontists, endodontists, pediatric dentists, and oral and maxillofacial surgeons.

Entertainment shone brighter than ever this year, with luncheons with New England author Claire Cook and activist/environmentalist Erin Brockovich, a cooking demonstration by celebrity chef Rocco DiSpirito, and, of course, Robin Williams, who was the Friday night entertainment. The spontaneous and quick-witted comedian performed for thousands in the BCEC Ballroom, engaging the audience with his hysterical over-the-top antics.

"I think YDC 32 succeeded in raising expectations for Yankee's future, and attendees can expect to see advances in all aspects of the meeting in 2008," stated Dr. Gold. "Yankee's move to the BCEC will bring very positive changes."

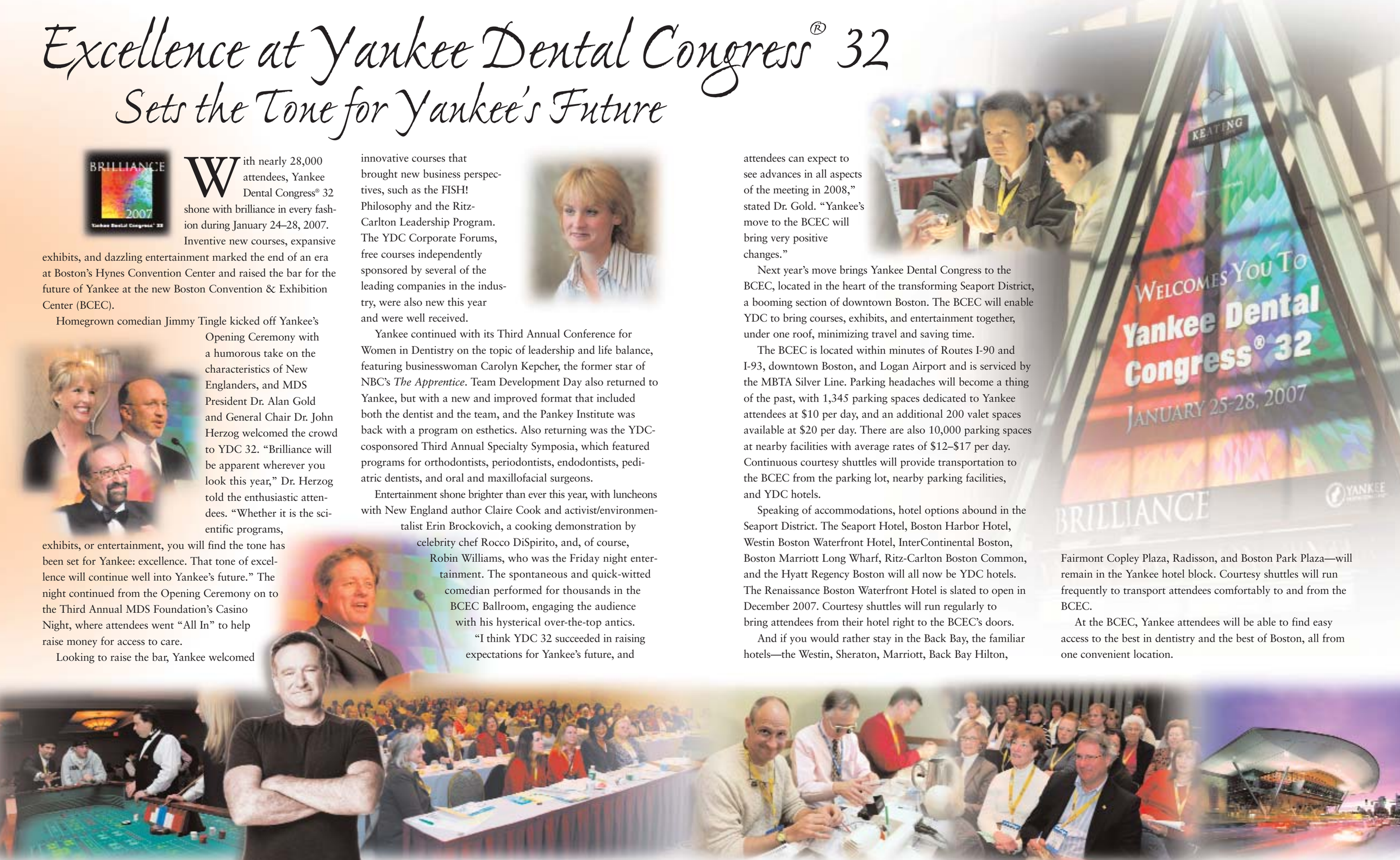
Next year's move brings Yankee Dental Congress to the BCEC, located in the heart of the transforming Seaport District, a booming section of downtown Boston. The BCEC will enable YDC to bring courses, exhibits, and entertainment together, under one roof, minimizing travel and saving time.

The BCEC is located within minutes of Routes I-90 and I-93, downtown Boston, and Logan Airport and is serviced by the MBTA Silver Line. Parking headaches will become a thing of the past, with 1,345 parking spaces dedicated to Yankee attendees at $10 per day, and an additional 200 valet spaces available at $20 per day. There are also 10,000 parking spaces at nearby facilities with average rates of $12–$17 per day. Continuous courtesy shuttles will provide transportation to the BCEC from the parking lot, nearby parking facilities, and YDC hotels.

Speaking of accommodations, hotel options abound in the Seaport District. The Seaport Hotel, Boston Harbor Hotel, Westin Boston Waterfront Hotel, InterContinental Boston, Boston Marriott Long Wharf, Ritz-Carlton Boston Common, and the Hyatt Regency Boston will all now be YDC hotels. The Renaissance Boston Waterfront Hotel is slated to open in December 2007. Courtesy shuttles will run regularly to bring attendees from their hotel right to the BCEC's doors.

And if you would rather stay in the Back Bay, the familiar hotels—the Westin, Sheraton, Marriott, Back Bay Hilton, Fairmont Copley Plaza, Radisson, and Boston Park Plaza—will remain in the Yankee hotel block. Courtesy shuttles will run frequently to transport attendees comfortably to and from the BCEC.

At the BCEC, Yankee attendees will be able to find easy access to the best in dentistry and the best of Boston, all from one convenient location.



A Clinico-Pathologic Correlation

NEOPHYTOS C. DEMETRIADES, DMD
CONSTANTINOS LASKARIDES, DMD, PHARMD
Dr. Demetriades is senior resident and Dr. Laskarides is director of the undergraduate program and a faculty member in the department of oral and maxillofacial surgery at the Tufts University School of Dental Medicine.

Introduction

Oral cancer represents approximately 3 percent of all cancers and is the eighth most common cancer affecting males in the United States, responsible for 8,000 deaths every year. Squamous cell carcinomas encompass at least 90 percent of all oral malignancies. The World Health Organization expects a worldwide rise in oral squamous cell carcinoma incidents in the next few decades. In the United States, at the time of diagnosis, 36 percent of the patients have localized disease, 43 percent have regionally spread disease, and 9 percent have distal metastasis.[1] In some western European countries, such as Belgium, Denmark, Greece, and the United Kingdom, there has been an upward trend in the incidence of the disease, which now comprises a real public health issue.

Squamous cell carcinomas have significant mortality and morbidity rates, and in spite of the vast amount of research and the advancement accomplished in the field of oncology and surgery, the mortality rates remain unchanged. In this article, we present a patient with squamous cell carcinoma of the anterior floor of the mouth, and elaborate on the risk factors, clinical features, and histopathologic characteristics of the disease, as well as the significance of early diagnosis and treatment.

History

Our patient is a 57-year-old female who was referred to the oral and maxillofacial surgery clinic at Tufts University School of Dental Medicine for evaluation of a lesion of the anterior floor of the mouth. The patient initially noted that the anterior floor of her mouth was sore, which she attributed to irritation associated with a burn from food intake. The lesion remained unchanged for one week with no signs of involution. The patient visited her dentist for further evaluation. After evaluating the lesion, her dentist deemed the area suspicious and performed a biopsy. The biopsy revealed a moderately differentiated squamous cell carcinoma. The patient was referred to our clinic for further treatment.

During history taking, the patient denied any paresthesia, odynophagia, dysphagia, dysgeusia, trismus, or hoarseness. The patient does not wear dentures and denied any history of trauma on the area.

Figure 1. Lesion on the anterior floor of the mouth with irregular, fungating, mildly elevated surface. Characteristic picture of speckled erythroplakia with ill-defined borders.

The patient's past medical history is significant for hypercholesterolemia, which is well controlled by medication (Lipitor), and diabetes mellitus type 2, which is controlled with diet. In terms of social history, the patient reported smoking one packet of tobacco a day for 30 years. She denies consistent alcohol use and any drug abuse.

Examination

Clinical examination of the oral cavity revealed a red lesion on the anterior floor of the mouth mucosa, with intralesional areas of leukoplakia (speckled erythroplakia) that had an irregular, fungating, mildly elevated surface, with ill-defined borders, 3 x 5 cm in size (see Figure 1). The lesion was painless on palpation, and on inspection, no evidence of ulceration, swelling, or trismus was appreciable. The lesion was crossing the midline with an extension to the ventral surface of the tongue. Dentition was sound, with no appreciable mobility, bleeding, or periodontal disease. No additional pathology was revealed during the examination of the rest of the oral mucosa and oropharynx. All cervical lymph node levels (I–VI) were palpated and there was no sign of lymphadenopathy. The thyroid gland was appreciated with normal size. The rest of the head and neck exam was insignificant.

Radiographs

A head and neck CT scan with IV contrast was performed for further evaluation of the extent of the disease to adjacent bony structures, or evidence of lymphadenopathy unable to be appreciated on clinical evaluation.

The CT scan results showed slight asymmetric enlargement of the right half of the mylohyoid muscle area. Bony structures were presented with normal radiographic characteristics. No evidence of intrabony extent of cancer or abnormally enlarged cervical lymph nodes was appreciated on that study.

Differential Diagnosis

Squamous cell carcinoma
Erythroplakia
Erythematous candidiasis
Erosive lichen planus
Local irritation (trauma, chemical burn)

Microscopic Examination

Microscopic examination of the specimen of the initial biopsy revealed keratinized stratified squamous epithelium overlying fibrous connective tissue; epithelial dysplasia characterized by altered rete ridge architecture; and expansion of the basal epithelial cell compartment. Focal area of dyskeratosis and occasional atypical mitotic figures were present. Nests of these atypical epithelial cells were seen invading the subjacent connective tissue stroma. The invasive tumor islands contained cells exhibiting nuclear pleomorphism and scattered atypical mitotic figures. A chronic inflammatory cell infiltrate is present throughout (see Figures 2 and 3).

Diagnosis

Moderately differentiated squamous cell carcinoma

Discussion

Oral squamous cell carcinoma (SCCA) has a remarkable incidence worldwide and a fairly onerous prognosis. Approximately 85 to 95 percent of all oral cancer is squamous cell carcinoma.[2] The etiology of SCCA of the oral cavity has been studied extensively. Numerous risk factors have been suggested as etiologic agents for the development of these malignancies. It is generally considered that oral cancer is most common in men in the sixth to eighth decades of life and is rare in persons younger than 40 years old. The incidence of oral squamous cell carcinoma in patients younger than 40 has been reported to range from 0.4 to 3.9 percent.[3] The outcome of the disease is somewhat worse in patients with lower socioeconomic status and education, most likely because of poorer oral hygiene and more difficult access to care. This diagnostic delay raises the probability of higher tumor growth spread, consequently aggravating the prognosis.[4,5]

A possible viral etiology has been demonstrated in oral cancers. There is escalating evidence of a causal association between human papillomavirus (HPV) and squamous cell carcinoma, with several studies showing that certain HPV subtypes are associated with increased risk of oral cancer.[1,4-6] HPV-16 may be responsible for more than 80 percent of HPV-positive oral squamous cell carcinomas.[1,4] Our patient was in the average-to-high-risk age, with no known HPV infection.

While no single causative agent can be attributed to the development of all oral cancers, several carcinogens have been identified, and of those, tobacco and alcohol appear to have the greatest impact on malignancy development. Although some results deny any association between survival and smoked tobacco or alcohol consumption, most authors report higher mortality in smokers and alcohol drinkers.[1,2,4,7] The risk of oral cancer associated with tobacco use is noted to be from two to 12 times higher than in the nonsmoking population, and 90 percent of individuals with oral cancer will have a smoking history.[4,7,8] Our patient states a 30-year smoking history and occasional alcohol consumption.

The location of the disease itself affects the outcome, prognosis, and treatment. Vascular and lymphatic networks, which vary between different anatomic sites, may influence tumor evolution and hence the outcome. Higher metastatic disease rates for SCCA have been reported associated with the tongue base rather than the oral tongue. Squamous cell carcinoma has a different rate of distribution on different anatomic sites. Mucosal lip carcinoma accounts for 2 to 42 percent; carcinoma of buccal mucosa represents 2 to 10 percent; carcinoma of alveolar ridge represents 2 to 18 percent; carcinoma of retromolar trigone represents 2 to 6 percent; and carcinoma of the anterior two-thirds of the tongue represents 22 to 49 percent of oral squamous cell carcinoma.[3,6,7,9]

Carcinoma of the floor of the mouth represents 8 to 25 percent of oral SCCA, and several studies have shown a dramatic increase in incidence. The lymphatic drainage of the floor of the mouth can cause metastatic spread of the disease to the ipsilateral submandibular, upper and middle jugular nodes.[6,8,9] Studies have shown that nearly one-half of all patients presenting with a floor-of-the-mouth carcinoma have metastatic disease at presentation.

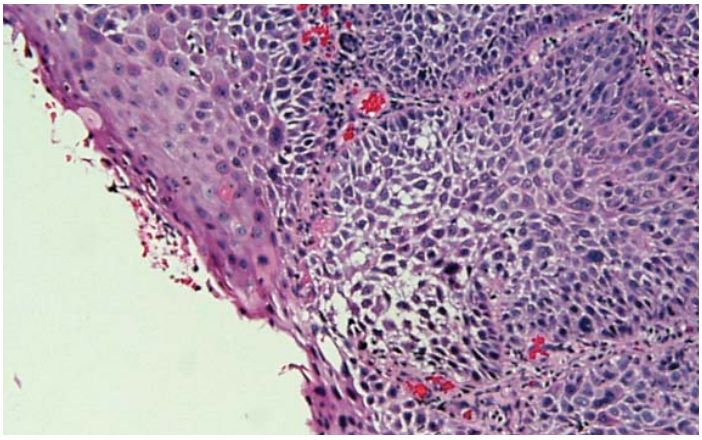


Figure 2. Low-power microphotography shows keratinized, stratified squamous epithelium overlying fibrous connective tissue. Tumor arises from the epithelium and invades lesional epithelium by irregular extension through the basement membrane, into subepithelial connective tissue.

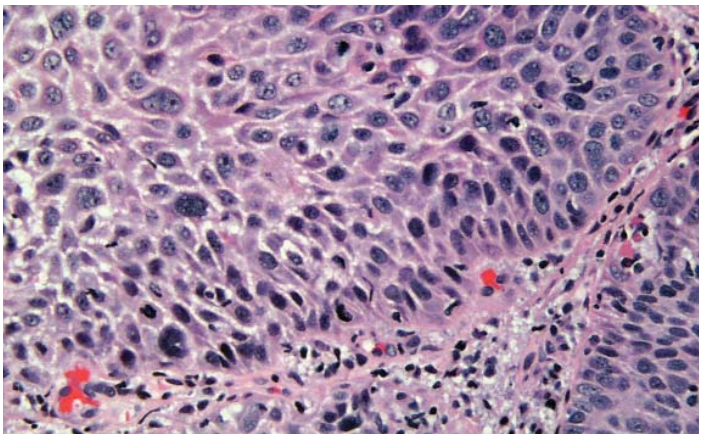


Figure 3. High-power microphotography shows invasive tumor islands containing cells exhibiting nuclear pleomorphism and scattered atypical mitotic figures. Characteristic dark staining (hyperchromatic) nuclei and an increase in the nuclear-to-cytoplasmic ratio is present in these cells.

The clinical presentation of SCCA can vary greatly and range from a small erythematous patch, erythroplakia, or white patch, leukoplakia, through to a large swelling, or area of ulceration.[2] The majority of cases of SCCA of the oral cavity develop in a previously clinical normal mucosa, although some may be preceded by leukoplakia and erythroplakia. Speckled erythroplakia, a nonhomogeneous erythroplakia with intralesional leukoplakia, harbors an ominous potential of malignancy, as rates of malignant transformation of up to 23 percent have been noted.[1,2,4] Unfortunately, SCCA is often painless at an early stage. The surface of the disease, if not ulcerated, is fungating, elevated with ill-defined borders.

All the characteristics described above were present on the clinical examination of our patient (see Figure 1), raising the suspicion of malignancy. Although clinical features that suggest the presence of SCCA may exist, the disease cannot be diagnosed clinically. Biopsy and histologic examination of the lesion is the only accurate manner of diagnosis of the disease and is mandatory for suspicious lesions. The use of exfoliative cytology, topical nuclear dye (tolinium chloride), and brush biopsy have all been suggested as methods of investigating suspicious lesions, but the usefulness of these techniques is uncertain and limited at the present time.

The histopathologic characteristics of the lesion are important for the diagnosis and the prognosis of the disease. Squamous cell carcinoma as a true malignant neoplasm exhibits histopathologic invasion by irregular extension of pathologic epithelium through the basement membrane, and into subepithelial connective tissue. The tumor cells appear with darkly staining (hyperchromatic) nuclei, and an increase in the nuclear-to-cytoplasmic ratio. Varying degrees of cellular and nuclear pleomorphism are seen. Although atypical, an increased number of mitotic figures may also be present. Keratin pearls are produced by tumor cells. A tumor that is mature enough to closely resemble its tissue of origin seems to grow at a slightly slower pace and to metastasize later in its course. Such a tumor is called well-differentiated.[2] In contrast, a tumor with much cellular and nuclear pleomorphism and with little or no keratin production may be so immature that it becomes difficult to identify the tissue of origin. Such a tumor often enlarges rapidly, metastasizes early in its course, and is termed poorly differentiated, or anaplastic.[10] A tumor with a microscopic appearance somewhere between these two extremes is labeled moderately differentiated carcinoma that shows a biologic behavior somewhat between that of the others.[1]

The treatment of SCCA of the oral cavity varies from a local wide excision of the lesion to extended, aggressive, ablating surgeries, radiotherapy, chemotherapy, and combination therapy.[11] The TNM staging, the location in the oral cavity, the type and aggressiveness of the tumor, and other comorbidities related with the patient's medical history that affect the surgical morbidity and mortality play a fundamental role in the selection of the most appropriate treatment plan. In our patient, the lesion was defined to be localized on the anterior floor of the mouth, and was less than 5 mm in thickness. No bony involvement was appreciated on the CT scan. No evidence of lymphatic spread was appreciated by clinical and radiographic examination. The tumor histopathologically was found to be moderately differentiated.

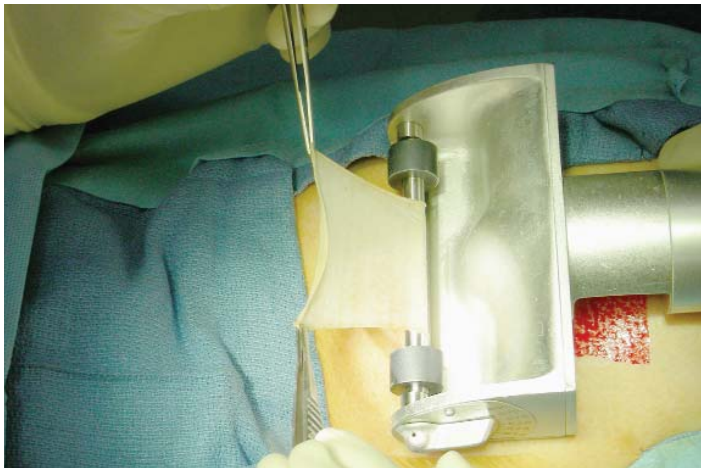


Figure 4. Harvesting of split thickness skin graft from patient's left thigh.

Conclusion

Considering the characteristics of the tumor, it was decided that wide local excision of the tumor with 1 cm of healthy mucosa would be adequate for the treatment of the disease. Frozen sections of the specimen's margins were evaluated microscopically to confirm that they were free of disease. A split thickness skin graft was harvested from the left thigh and grafted on the area of the surgical defect (see Figure 4). Due to the location of the tumor (the floor of the mouth) and the high-risk metastatic potential of tumors of this area with spread to the submandibular, upper and middle jugular lymph nodes, a selective modified neck dissection (supraomohyoid) was performed at the same time with the resection of the primary tumor for treatment of possible occult lymphatic spread of the disease.[11] The patient is set for a long-term follow-up schedule for evaluation and early diagnosis of possible future recurrence or evidence of new tumor development. ■

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SMOKER'S MELANOSIS

SMOKER'S MELANOSIS REPRESENTS DIFFUSE BENIGN PIGMENTATION of the oral mucosa, most commonly found on the facial-attached gingiva of the anterior dentition. Although the biochemical basis for smoking-associated pigmentation is not fully understood, some studies have shown that stimulation of melanin production may be due to retention of nicotine in the gingival tissues, causing increased melanin synthesis[1], and the function of nicotine[2] and benzpyrene[3] in tobacco smoke relative to melanin.

Smoker's melanosis presents as diffuse benign pigmentation of the oral mucosa.

In some cases, the changes are confined to the interdental papillae, but pronounced examples might involve the entire attached gingiva. In distinguishing smoker's melanosis from physiologic pigmentation, smoker's melanosis involves marginal gingiva, is of recent onset, and increases in intensity and number of lesions with an increase in cigarette consumption. Areas of oral depigmentation surrounded by hyperpigmentation have been described in patients who consume alcohol in addition to smoking. Studies have shown gradual reduction in the intensity of pigmentation upon discontinuation of smoking. Given that these lesions present in patients in adulthood and often darken progressively over time, biopsy is often indicated to rule out melanoma. ■

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CLINICAL CASE STUDY

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NONSURGICAL TREATMENT OF CLASS III MALOCCLUSION

THE PURPOSE OF THIS CLINICAL CASE IS TO TREAT A SEVERE CLASS III MALOCCLUSION WITHOUT orthognathic surgery in a 12-year-old female.

Comprehensive orthodontic treatment, which includes orthodontic bands and brackets, was instituted. Heat-treated nitinol round and rectangular wires were used to open the bite through the complex movement of the premaxilla both anteriorly and superiorly. The nitinol wire provided varied forces for both anterior and posterior teeth. The advantage of using this type of nitinol wire is that it helps to move teeth with light forces, which minimizes orthodontic complications such as root resorption. Finishing of the occlusion was done with the help of orthodontic elastics and stainless steel wires. Treatment time was 18 months. Upon completion, Hawley retainers were provided for both maxillary and mandibular teeth.

Even though the final results achieved a Class I canine and molar relationship, surgery may be necessary in the future should the patient exhibit Class III growth patterns. ■

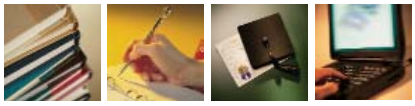
Figure 1. Initial anterior occlusion.

Figure 2. Final anterior occlusion.

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.



DENTAL EDUCATION

MELISSA CARMAN, MANAGING EDITOR

Highlighting key events taking place in dental education in Massachusetts.

DENTAL CAREER NETWORK

Boston University

EVERY DENTAL PRACTICE HAS BEEN THERE: A STAFF MEMBER, associate, or dental hygienist leaves and the scramble is on to find a replacement. But what's the best way to go about finding the ideal match for your practice? Many owners immediately put the word out that they're looking, then interview candidates they find either through a newspaper or journal advertisement or, more often than not, through word of mouth.

This may not be the best way to find the best person. With more and more job searches migrating online, the power of the Internet can be harnessed to do much of the legwork for you, ensuring that you hire the best candidate for your particular needs.

"I have been using the Dental Career Network for a few years," says Alex Faigel, manager of an East Boston multispecialty practice. Faigel is referring to the largest New England-focused career Web site, ***www.dentalcareernetwork.com***, which, as its name indicates, caters to the needs of dental professionals.

"The Dental Career Network is my first stop because of the sheer quality of responses," he says. "I always find it a great resource, much better than *The Boston Globe*."

Managed by Boston University School of Dental Medicine and the Massachusetts Dental Society, the Dental Career Network contains hundreds of job listings not only for dentists but also for dental hygienists, dental assistants, and front office staff. Positions include those in clinical settings, along with ones in public health and academia.

According to Madalyn Mann, director of the Dental Career Network, dentists often search for an employee by asking friends or colleagues for recommendations and advertising in local newspapers and dental journals. "But colleagues may not know your needs, and you may end up with someone who isn't the best fit for your practice," she says. "And newspaper advertising is much more expensive and less effective than a Web-based dental employment search engine like the Dental Career Network."

Mann also notes that it is difficult to describe positions adequately in the limited space of a newspaper ad. The Dental Career Network allows you to post as much information as you choose; therefore, "the more information you post, the more likely you are to get qualified candidates," says Mann.

One of the Dental Career Network's features allows users to seek candidates based on customized preferences, including location, specialty, and salary requirements. The Web site, which is free for those seeking a new job, also contains licensure information and job search advice such as resume and interviewing tips.

"The site was designed to be very intuitive and easy for Internet beginners, while still being robust enough to offer fully customized searches to all," says Mann.

Tufts University

LAST FALL, NOBEL BIOCARE AWARDED TUFTS UNIVERSITY SCHOOL of Dental Medicine (TUSDM) a $4 million gift to further the study of implantology at the dental school and to expand its Oral and Maxillofacial Surgery Clinic.

This interdisciplinary clinic, which includes the Implant Center, trains postdoctoral students in oral and maxillofacial surgery, periodontics, prosthodontics, and implant dentistry. TUSDM has included implant dentistry in its curriculum for predoctoral students since the late 1980s. The funds will be used to expand both predoctoral and postdoctoral training.

"The real impact is not only [in providing] implantology training for our dental students but [in] raising the standard of care for patients served by the thousands of Tufts dentists nationally and internationally," says Lonnie Norris, DMD, MPH, dean of TUSDM. "Our goal is to advance the caliber of dental care for patients served by past, present, and future TUSDM students and graduates."

(Left to right) Robert Gottlander, VP/Global Marketing, Nobel Biocare; Heliane Canepa, president and CEO, Nobel Biocare; Dr. Maria Papageorge, chair of the department of oral and maxillofacial surgery, TUSDM; Dr. Lonnie Norris, dean, TUSDM; and Dr. Lawrence S. Bacow, president, Tufts University.

THE TUFTS UNIVERSITY SCHOOL OF DENTAL MEDICINE HELD ITS annual Wide Open Golf Tournament on September 25, 2006, at the Andover Country Club in Andover, MA. This event saw more than $14,000 being raised for the Dental Alumni Student Loan Fund. Over its 24-year history, this annual event has raised a total of $219,469 for this beneficial fund. ■

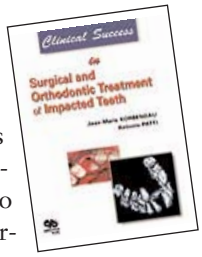
BOOK REVIEWS

NORMAN BECKER, DDS, EDITOR EMERITUS

Clinical Success in Surgical and Orthodontic Treatment of Impacted Teeth

JEAN-MARIE KORBENDAU AND ANTONIO PATTI

Quintessence Publishing



This textbook designs strategies for intervention in the anatomic situations that deal with impacted teeth. It addresses problems in children and adolescents from both orthodontic and surgical perspectives, with a goal to reduce or, when possible, avoid surgical intervention.

With the use of wonderfully reproduced photographs and drawings, in addition to precise reproductions of computerized tomography scans, Drs. Korbendau and Patti begin the book with a chapter on the eruption stages of permanent teeth. This chapter deals with the components of eruption, location of bony crypts, eruptive pathways, and relationship of malpositioned tooth buds to anatomic structures. Other chapters describe orthodontic and radiographic assessments of impacted teeth; preventive treatment of impactions; criteria for choosing orthodontic and surgical protocols; impacted maxillary canines both from a buccal and a lingual approach; and impacted mandibular teeth.

Although the text is primarily aimed at orthodontists and oral surgeons, general dentists will be able to gather information that will help them better understand the need and timing for intervention.

QuintEssentials 34: Dental Erosion

R. GRAHAM CHADWICK

Quintessence Publishing

Editor in Chief Nairn H. F. Wilson's choice of Dr. R. Graham Chadwick to prepare a textbook about the effects, consequences, and management of dental erosion was masterful. This addition to the QuintEssentials of Dental Practice clinical series is another gem for the dental faction.

As with the other evidence-based books in this series, the material is presented in a concise, well-illustrated, easy-to-read manner that highlights key issues of practical value. Starting with a definition of dental erosion, the author provides a history as well as a description of the condition. Chapters on risk factors, management strategies, preventive measures, and future possibilities follow. Each chapter begins with a description of the chapter's aim and what understanding should result upon completion.

As a practitioner who is sometimes faced with the dilemma of tooth structure so eroded that treatment is a problem, I was impressed by the suggestion to consider protecting the compromised tooth structure using adhesively bonded inlays with no prior tooth preparation.

QuintEssentials 27: Minor Oral Surgery in Dental Practice

JOHN MEECHAN, MARK GREENWOOD, UNDRELL J. MOORE, PETER J. THOMSON, IAN M. BROOK, AND KEITH G. SMITH

Quintessence Publishing

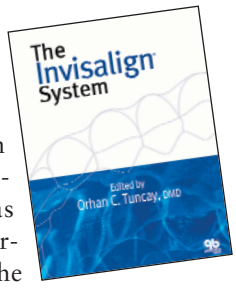
Using well-organized text, easy-to-understand language, and clear photographs and drawings, the authors of this text present practical hints about surgical procedures for the generalist. Although there are a variety of subjects—including minor oral surgery, pharmacology, extraction of teeth and roots, management of impacted teeth, surgical endodontics, implants and surgery to facilitate prosthetic care, management of cysts, management of dentoalveolar trauma and lacerations, biopsy techniques, and management of intraoral calculi—none of these is overwhelming.

The authors address medico-legal considerations by making clinicians aware of the surgical procedures that they can handle with confidence as well as those for which they need to make a referral. In addition, the authors instruct that each procedure undertaken must be properly explained to the patient—including a description of the operation, the possible complications, and the postoperative course—in order to gain informed consent. The method of pain control must also be discussed.

The Invisalign® System

ORHAN C. TUNCAY

Quintessence Publishing



When this impressive-looking book first arrived on my desk, I was afraid that it would be nothing more than a recruiting device. I had been somewhat educated as to the pros and cons of the Invisalign System by my orthodontic colleagues. But the many invitations to "learn to use the treatment in your practice" made me feel that the Invisalign System could easily become an abused device. However, this is an educational tool, and not a how-to manual. It was designed to expose the clinician to the underlying elements of the philosophy of the Invisalign System.

Each of the contributors has taken the task of explaining the various facets of this orthodontic technique using text, drawings, and photographs. Throughout the book, there are a variety of subtle hints that a generalist can use in daily practice, such as troubleshooting impression tips.

This was not an easy text to read and review, but I am glad that I did. I learned some practical dentistry, but I also learned that it will take much more than just the reading of a textbook to include a technology such as this as part of our clinical care. ■

ART OF DENTISTRY

MICHAEL D. NASH, DDS
Dr. Nash is retired editor of the Mississippi Dental Association and current newsletter editor for the American Association of Dental Editors.

BACK TO SCHOOL

It was one of those warm and gloomy autumn days when you could just sense that a violent change in the weather was imminent. I was home nursing a cold when the telephone rang. The woman identified herself as being with the city school system and proceeded to say, "We're having our annual Career Day and would love to have you speak about your profession."

This was great, I thought to myself, for someone actually wanted to hear my opinion on something. I'll be inspiring young men and women to shoot for the stars in the profession of dentistry. I responded, trying not to seem overly eager, "Well, sure! When do you want me?"

"Later this morning," she whispered and immediately added: "The dental hygienist we had scheduled is expecting, and it seems her baby has chosen today of all days to come early. Would you please consider giving a 5- to 10-minute presentation on dentistry? Please?" She actually begged.

"Okay," my lips muttered before my brain could stop them. I could give an hour's talk on the profession off the top of my head, and it's always good form to give back to one's community, I thought to myself. I then asked, "Where is the high school having its Career Day?"

"Oh no, silly!" she chuckled and then corrected me. "It's not for the high school. It's to be held in the grammar school cafetorium."

"You're having a Career Day for grade-schoolers?" I wondered aloud.

"Actually, Dr. Nash, it's the kindergarten that's having its annual Career Day today. See you at 10."

I arrived a few minutes early to the cafetorium (half cafeteria and half auditorium). A frantic middle-aged woman greeted me in both hurried and harried fashion, "I certainly appreciate your coming on such short notice, Dr. Nash. The children have already had one tornado drill this morning and we're all a bit edgy. Our policewoman and firemen can't promise they'll be able to stay. They need to go first, so we're bumping you back a bit." She scurried off, and with no other option, I eased my way into the cafetorium. Once there, I found myself crammed to the armpits with faculty, parents, and hordes of rabid and rampant Lilliputians. Two hundred wee pairs of eyes followed the first scheduled speaker as he weaved his way to the front. Eye height for the vast majority of the audience was about level with the speaker's shoelaces.

The first participant, or dare I say victim, was a reporter from our local rag. He went over about as well as one would expect with an audience that was still mastering nap time and bathroom etiquette at this point in their formal education. A surgical nurse fared somewhat better and received a lively chuckle when she blew into her stethoscope, whipped the hose into the air, and snorted twice, mimicking a rampaging elephant. Third on the hit list was a hefty policewoman. She was on a roll right up until she refused to unholster her pistol for a little show-and-tell. Worse still, she owned up to the fact that she'd never actually shot anybody.

Three men in blue from our local fire department, however, delivered the coup de grace. They'd driven up right out front, quite ceremoniously, in a big red hook and ladder. They entered in full battle dress just in time to supersede my presentation.

The lightning flashed violently, the thunder rolled, rattling windows and teeth as the room lights flickered just as our three heroes began. Little hands bobbed up and down everywhere, desperately trying to finagle the first question. Miraculously, as the fire boss was about to field the initial child's query, three beepers chirped simultaneously. As our three champions begged for and instantaneously received perfect silence, the fire station emergency dispatcher announced, "House struck by lightning! Come quickly!"

"We gotta go!" insisted the fire boss as all three clanged and clattered, dashing for the door. The room exploded with noise. The principal leapt to the stage and bellowed, "Dr. Nash has come to tell us about dentistry! Let's give him a big welcome, children."

As I approached the front, there was actually a smattering of adult applause. However, this was immediately obliterated by the fire engine's erupting siren, plainly visible brilliant flashing and rotating emergency red lights, and an incredible bolt of lightning followed on perfect cue by a wicked roll of thunder. The place went nuts.

Mine was a splendid talk. It would have brought tears to a room full of battle-hardened school guidance counselors. But alas . . . it fell on deaf little ears. I concluded my talk by taking questions, but after several anxious moments only one hand popped up. The little tyke looked at me, pointed his finger to my shoes upon the second step, and shouted into the microphone, "How did your feet get so big?"

Of the original 200 children in forced attendance, a mere 199 should become firefighters later in the twenty-first century. The one remaining child, I feel certain, will opt for a career in shoe sales.

What I learned from all this can be summed up in this new rule of thumb: If they can't spell "dentistry," they certainly don't need to know about it, careerwise anyway. ■