

ROUTINE DENTAL PANORAMIC RADIOGRAPHS NOT NECESSARY

Panoramic radiographs could be used selectively in some cases instead of as a routine diagnostic tool, researchers said on March 11 at the 83rd General Session and Exhibition of the International Association for Dental Research in Baltimore.

Researchers at the State University of New York at Buffalo (UB) School of Dental Medicine randomly selected 1,000 panoramic radiographs from the records of patients who were admitted to UB dental-school clinics between January 2000 and December 2003. The sample was composed of records from 536 women and 464 men, who had a mean age of 52 years.

Two dental experts evaluated the radiographs for evidence of bone lesions or other abnormal appearances that would indicate problems. They found 352 lesions and concluded that all but a few would have been picked up by full-mouth series radiographs.

“Nearly everything a dentist needs to know about a person’s oral health is revealed by full-mouth periapical X-rays,” said Dr. Lida Radfar, senior author of the study and an assistant professor of oral diagnostic sciences, UB School of Dental Medicine.

“The only lesions that would not have been picked up on a full-mouth series,” continued Dr. Radfar, “were those in the sinus cavities of the cheeks, seen on 1.5 percent of the panoramic X-rays; those in the soft tissue of the neck, revealed on 4.8 percent of panoramic X-rays; and three lesions locat-

ed in the upper portion of the jaw bone close to the temporomandibular jaw joints.

“Based on our study, the panoramic X-ray has limited value,” said Dr. Radfar. “Eliminating it as a routine part of dental care would expose patients to fewer X-rays, although the amount is minimal, and save costs.”

BLUE LIGHT MAY FIGHT BACTERIA ASSOCIATED WITH PERIODONTITIS

Light in the blue region of the visible spectrum can be used selectively to suppress bacteria commonly associated with periodontitis, according to a study in the April issue of *Journal of Antimicrobial Agents and Chemotherapy*.

Researchers at The Forsyth Institute had shown that as many as 700 different types of oral bacteria may be found in dental plaque that accumulates on teeth. While some bacteria appear to be benign or even helpful, other bacteria may invade and destroy gingiva and bone, leading to loss of teeth and, possibly, to infection elsewhere in the body.

Among the more destructive bacteria are the so-called “black-pigmented bacteria” (BPB) that have been implicated as pathogens associated with periodontitis. BPB accumulate black pigment consisting mainly of organic compounds called porphyrins. Some porphyrins are photosensitive, and when they are activated by visible light, a photodynamic reaction is induced that kills the microorganism within seconds.

Principal investigator Dr. Nikos Soukos, director of the Forsyth Laboratory of Applied

Molecular Photomedicine, and colleague Dr. Max Goodson, director of Clinical Research at the Forsyth Institute, knew that other researchers had used lasers to deliver red or green light to partially inactivated certain oral bacteria, and that porphyrins absorb blue light more readily than red or green light.

In a study funded in part by National Institute of Dental and Craniofacial Research and BriteSmile Development, they used a halogen lamp source commonly used for tooth whitening to shine broadband light composed mainly of blue and a small percentage of green light (wavelengths ranged from 380-520 nanometers) on pure cultures of BPB and on dental plaque samples obtained from people with chronic periodontitis.

They found that the light rapidly killed BPB in pure cultures and that it selectively eliminated BPB in plaque samples containing 500 to 600 different bacteria. They also found that certain bacteria species were inactivated more readily by the light than were others. Varying the intensity and exposure times had different effects on different bacteria species.

They also found that when the proportion of BPBs was reduced, the proportion of potentially helpful bacteria increased. “This suggests that it might one day be feasible to use light to restore a healthy bacterial balance in the mouth,” Dr. Soukos said.

The team is developing a hand-held, light-based device that one day might be used by consumers to help combat periodontal disease.

DIRECT ASSOCIATION BETWEEN CARDIOVASCULAR DISEASE, PERIODONTAL BACTERIA FOUND

Older adults who have higher proportions of four periodontal-disease-causing bacteria in their mouths also tend to have thicker carotid arteries, according to a study in the Feb. 8 issue of the American Heart Association journal *Circulation*.

“Although more than 600 bacteria have been shown to colonize the mouth, each person tends to carry different proportions of these microbes,” said co-author Dr. Panos N. Papapanou, professor and chair, Section of Oral and Diagnostics Sciences, and the director, Division of Periodontics, Columbia University School of Dental and Oral Surgery. He noted that only a subset of bacteria tends to be dominant in dental plaque.

“We wanted to know whether it was true that the greater the proportion of so-called ‘bad’ bacteria in the mouth, the higher the likelihood of a thickened carotid artery,” added Dr. Papapanou.

To find an answer, researchers, led by Moïse Desvarieux, M.D., Ph.D., an infectious disease epidemiologist, Columbia University’s Mailman School of Public Health and the University of Minnesota, collected on average seven dental plaque samples from each of 657 older adults who had not lost their teeth and were enrolled in Oral Infections and Vascular Disease Epidemiology Study, a multidisciplinary endeavor sponsored by the National Institute of Dental and Craniofacial Research. Researchers took diseased and

healthy samples from predetermined sites in the mouth and evaluated them for 11 oral bacteria, including four widely regarded to be involved in causing periodontal disease:

Actinobacillus actinomycetemcomitans, *Porphyromonas gingivalis*, *Tannerella forsythia* and *Treponema denticola*. The other seven bacteria served as controls, as their roles in periodontal disease were neutral or had not been established yet.

Subjects underwent carotid intima-media thickness (IMT) measurement to evaluate their cardiovascular health. They also each provided a blood sample to determine their C-reactive protein levels; C-reactive protein has been reported to be elevated in people with periodontal disease, and studies have found that testing for this protein may help predict the development of heart disease.

Controlling for several risk factors that might skew their data—such as smoking and diabetes—researchers found the higher the levels of these periodontal-disease-causing bacteria, the more likely subjects were to have thicker carotid arteries. Researchers noted no association between IMT, the periodontal pathogens and C-reactive protein levels, which suggests that the protein is involved in another cardiovascular disease pathway.

Next, researchers wondered whether the broad association might be due to the four pathogens involved in causing periodontal disease, which, when combined, accounted for only 23 percent of the bacteria in dental plaque. If so, the finding would provide added specificity to strengthen the case for the association.

“After reanalyzing the data, we found, with the exception of an oral bacterium called *Micromonas micros*, the relationship was limited to these four established oral pathogens,” said co-author David Jacobs, Ph.D., a professor in the Division of Epidemiology at the University of Minnesota School of Public Health.

“It now becomes crucial to follow the participants over time and see whether these baseline findings hold up and further translate into clinical disease,” continued Dr. Jacobs.

CORRECTION

The article “The Antimicrobial Potential of 14 Natural Herbal Dentifrices: Results of an In Vitro Diffusion Method Study” published in the August 2004 issue of JADA by Dr. Sean S. Lee and colleagues contained an error. The authors tested the nonfluoridated version of Tom’s of Maine Natural Toothpaste, which does not carry the ADA Seal of Acceptance.

Compiled by Amy E. Lund, editorial coordinator.

MEETINGS

■ The Dental Association of Thailand will hold its scientific meeting June 15-17 in Bangkok. For more information contact Dr. Prinya Pathomkulmai by phone at 011-662-539-4748, by fax at 011-662-514-1100 or by e-mail at “prinya@yahoo.com”.

■ The American Dental Hygienists’ Association will hold its 82nd Annual Session June 22-29 in Las Vegas. For more information, contact Kathy Madryk by phone at 1-312-440-8900, by fax at 1-312-440-8929 or by e-mail at

"kathym@adha.net" or visit "www.adha.org".

■ The Academy for Sports Dentistry will hold its 24th Annual Symposium June 23-25 in Miami Beach, Fla. For more information, contact Shelly Lott by phone at 1-800-273-1788, by fax at 1-217-227-3438 or by e-mail at "shelly@consolidated.net" or visit "www.sportsdentistry-iasd.org".

■ The World Congress on Pain will be held Aug. 21-26 in Sydney, Australia. For more information, visit "www.iasp-pain.org".

■ The 17th International Conference on Oral & Maxillofacial Surgery will be held Aug. 29-Sept. 2 in Vienna, Austria. For more information, contact Dr. Birgit Kamolz by phone at 011-43-1-405-138311 or by e-mail at "icom@medacad.org" or visit "www.icomsvienna2005.org".

■ The FDI will hold its World Dental Congress Aug. 24-27 in Montréal. For more information, contact John Hern by phone at 1-312-440-2727, by fax at 1-312-587-4735 or by e-mail at "hernj@ada.org" or visit "www.fdiworldental.org".

■ The Third International Women's Leadership Conference will be held Aug. 28-30 in Montréal. For more information, contact Dr. Jeanne Sinkford by phone at 1-202-289-7201, by fax at 1-202-289-7204 or by e-mail at "adea@adea.org".

APPOINTMENTS/ ELECTIONS/AWARDS

■ **Dr. L. Stephen Buchanan**, Santa Barbara, Calif.; **Dr. Donald R. Poulton**, San Francisco; and **Dr. Craig Yarborough**, Greenbrae, Calif., received Medallion of Distinction

Awards from the University of the Pacific School of Dentistry.

■ **Dr. James S. Cole**, Dallas, received Hall of Fame recognition from the Baylor College of Dentistry. **Dr. Patricia L. Blanton**, Dallas, received the Distinguished Alumni Award;

and **Dr. Jason B. Cope**, Dallas, received the Outstanding Young Alumni Award.

■ **Dr. Burton L. Edelstein**, New York City, received the Public Advocacy Award from the Friends of the National Institute for Dental and Craniofacial Research. He also received a Presidential Citation from the American Dental Education Association and the Cushing Award from the Chicago Dental Society.

■ **Dr. Joseph R. Greenberg**, Bryn Mawr, Pa., received the Birger Community Service Award from the Alpha Omega International Dental Fraternity. ■ **Dr. Leslie Seldin**, New York City, received the Jarvie-Burkhart Award from the New York State Dental Association.

■ **Dr. Thomas D. Taylor**, West Hartford, Conn., was appointed head of Oral Rehabilitation, Biomaterials and Skeletal Development at the University of Connecticut School of Dental Medicine. **Dr. Ravinda Nanda**, Farmington, was appointed head of Orthodontics, Oral and Maxillofacial Surgery, Pediatric Dentistry and Advanced General Dentistry.

CALENDAR OF EVENTS

ADA ANNUAL SESSIONS

2005 Oct. 6-9, Philadelphia
2006 Oct. 16-19, Las Vegas

2007 Sept. 27-Oct. 2, San Francisco

2005 CONSTITUENT DENTAL SOCIETY ANNUAL MEETINGS

Meeting dates are subject to change. Dentists interested in attending any of the listed meetings should contact the sponsoring organization for more information.

Alabama Dental Association, 836 Washington St., Montgomery 36104, 1-334-265-1684, **June 7-12, Orange Beach.**

California Dental Association, 1201 "K" Street Mall, Sacramento 95853, 1-916-443-3382, **Fall Scientific Session, Sept. 9-11, San Francisco.**

Colegio de Cirujanos Dentistas de Puerto Rico, 200 Domenech Ave., San Juan 00918, 1-787-763-6335, **Summer Mini-Convention, June 30-July 4, Fajardo.**

Colorado Dental Association, 3690 S. Yosemite, Suite 100, Denver 80237, 1-303-996-2845, **June 23-26, Steamboat Springs.**

Florida Dental Association, 1111 East Tennessee St., Tallahassee 32308, 1-850-681-3629, **Florida National Dental Congress, July 7-9, Orlando.**

Georgia Dental Association, 7000 Peachtree Dunwoody Road NE, Suite 200, Building 17, Atlanta 30328-1655, 1-404-636-7553, **July 28-31, Ponte Vedre Beach, Fla.**

Illinois State Dental Society, P.O. Box 376, Springfield 62705, 1-217-525-1406, **Sept. 9-11, Itasca.**

Indiana Dental Association, P.O. Box 2467, Indianapolis 46206, 1-317-634-

2610, **June 2-4, Indianapolis.**

Kansas Dental Association, 5200 SW Huntoon St., Topeka 66604, 1-785-272-7360, **Heart of America Dental Symposium, July 28-31, Branson, Mo.**

Maine Dental Association, P.O. Box 215, Manchester 04351, 1-207-622-7900, **June 17-18, Rockport.**

Maryland State Dental Association, 6410 Dobbin Road, Suite F, Columbia 21045, 1-410-964-2880, **Chesapeake Dental Conference, Sept. 23-25, Ocean City.**

Mississippi Dental Association, 2630 Ridgewood Road, Jackson 39216, 1-601-982-0442, **June 3-8, Destin, Fla.**

Missouri Dental Association, 3340 American Ave., P.O. Box 104900, Jefferson City 65110, 1-573-634-3436, **Heart of America Dental Symposium, July 28-31, Branson.**

Nevada Dental Association, 8863 W. Flamingo Road, Suite 102, Las Vegas 89147, 1-702-255-4211, **Summer Meeting, July 7-10, Sunriver, Ore.**

New Jersey Dental Association, One Dental Plaza, P.O. Box 6020, North Brunswick 08902, 1-732-821-9400, **June 8-10, Atlantic City.**

New Mexico Dental Association, 3736 Eubank Blvd., Suite D2, Albuquerque 87111, 1-505-294-1368, **June 9-11, Albuquerque.**

New York State Dental Association, 121 State St., 4th Floor, Albany 12207, 1-518-465-0044, **June 9-12, Amherst; Board of Governors Meeting, Nov. 18-19, New York City.**

North Carolina Dental Society, P.O. Box 4099, Cary 27519, 1-919-677-1396, **May 19-22, Myrtle Beach, S.C.**

North Dakota Dental Association, P.O. Box 1332, Bismarck 58502, 1-701-223-8870, **Annual Session, Sept. 15-18, Fargo.**

Ohio Dental Association, 1370 Dublin Road, Columbus 43215, 1-614-486-2700, **Sept. 15-18, Columbus.**

Rhode Island Dental Association, 200 Centerville Road, Suite 7, Warwick 02886, 1-401-732-6833, **May 18,**

Providence.

Tennessee Dental Association, 2104 Sunset Place, Nashville 37212, 1-615-383-8962, **May 19-22, Gatlinburg.**

Vermont State Dental Society, 100 Dorset St., Suite 18, South Burlington 05403, 1-802-864-0115, **Sept. 22-23, Burlington.**

Virginia Dental Association, 7525 Staples Mill Road, Richmond 23228, 1-804-261-1610, **Sept. 14-18, Richmond.**

Washington State Dental Association, 1001 Fourth Ave., Suite 3800, Seattle 98154, 1-206-448-1914, **Pacific Northwest Dental Conference, July 14-15, Seattle.**

West Virginia Dental Association, 2003 Quarrier St., Charleston 25311, 1-304-344-5246, **July 14-17, White Sulphur Springs.**

Wyoming Dental Association, 502 S. Fourth St., Laramie 82070, 1-307-755-4009, **June 9-12, Jackson.**

Compiled by Mark Berthold, senior editor, ADA News.