DEMENTIA FRIENDLY DENTAL PRACTICES

Patient Management - 2

Presenter

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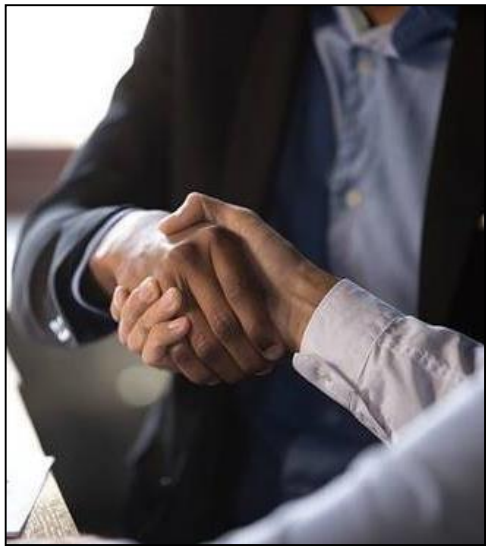
Professor, University of Minnesota School of Dentistry

& Minnesota Geriatric Workforce Enhancement Program;

Dental Director, Walker Methodist Dental Clinic, Minneapolis

Disclosures

- Employer:
  - UMN School of Dentistry
- UMN Affiliation Agreement:
  - Walker Methodist Health Center, Mpls
- Grants:
  - ASTER Labs, Shoreview, MN
    - NIH/NIDCR and CDC contracts
  - MN Northstar Geriatric Workforce Enhancement Program (HRSA)
- I will not discuss off-label or investigational product use.



Project Partners

ACT ON ALZHEIMER'S

A Program of TRELLIS™

TRELLIS

Minnesota Northstar Geriatrics Workforce Enhancement Program

MN GWEP

The Minnesota Northstar GWEP is supported by the Health Resources and Services Administration (HRSA) Geriatrics Workforce Enhancement Program of the U.S. Department of Health and Human Services, Award No. U1QHP33076; the University of Minnesota Office of Academic Clinical Affairs; and the Otto Bremer Trust.

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UNIVERSITY OF MINNESOTA
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Delta Dental of Minnesota Foundation

MINNESOTA DENTAL ASSOCIATION®

The Barclay Group

Other Ways to Avoid Trouble

Simplify Post-Op Care

- Extra attention to wound closure
- Hemostatic agents
  - Gelfoam®, CollaPlug®, etc.
- Caution with gauze packs
  - Remove before pt leaves if unaccompanied
- Pain meds already in use?

Communication

- **Printed instructions:**
  - **Easy to read (large font, high contrast print)**
  - **Check-off boxes to limit orders**
  - **Notify key care partners**

Walker Dental Clinic
3737 Bryant Avenue, South
Minneapolis, MN 55409
612-827-8310

CARE OF THE MOUTH AFTER ORAL SURGERY

☐ **GAUZE PACK** – Gauze has been placed over the surgical site(s). Remove at _____am pm.

☐ **SILK SUTURES** (stitches) – Silk sutures need to be removed at the dental office in 7-14 days.

☐ **DISSOLVING SUTURES** (stitches) – Dissolving (gut) sutures will fall out in 5-7 days.

WALKER DENTAL CLINIC *612-827-8310*

CLIENT NAME: Ima Codger

POST-OPERATIVE ORDERS: ORAL SURGERY

☒ GAUZE PACK – Gauze has been placed over the surgical site(s). Please remove at 1:00 AM/PM.

☒ DO NOT RINSE MOUTH FOR 24 HOURS to avoid disturbing blood clots. After 24 hours, patient may rinse gently with warm salt water (1/2 tsp salt in 8 oz. warm water) q 4 h x 2 days.

☒ SUTURES – Silk sutures must be removed by dental staff in 7-14 days. Dissolving sutures will fall out in 5-7 days.

☒ BLEEDING – Following extractions or other oral surgery some bleeding is normal. If bright red bleeding occurs:

1. Place folded gauze pads over the area and have patient bite down firmly for 20 minutes. Repeat x 3 prn.
2. Have patient bite down firmly on a wet teabag for 20 minutes. (Tea contains natural hemostatic agents.)
3. If bright red bleeding still persists after these measures, please call our office or the on-call dentist.

☐ SWELLING – Apply ice pack to the face over the surgical area – 20 minutes on and 10 minutes off for one hour.

☒ PAIN – For mild pain, Tylenol may be administered prn per current facility standing orders x 3 days. Call us if pain is not relieved.

☒ FOOD & DRINK – Eat a light/soft diet for 24 hours. Avoid very hot or very cold foods/drinks and use of straws for 24 hours.

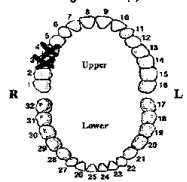
☐ OTHER PROBLEMS:
1. Hematoma can occur after some extractions and will fade after 1 or 2 weeks.
2. Small, sharp bone chips may work their way up through the gums during healing. Call our office if these are noted.

☒ SMOKING – Smoking should be avoided or reduced as much as possible during the first 2-3 days after oral surgery to help healing.

☒ ORAL HYGIENE – Do not brush surgical area for 24 hours. After 24 hours, please resume gentle toothbrushing to keep area clean.

☒ HOW TO REACH US – To report severe pain, bleeding or unusual symptoms, please call our office at 612-827-8310 during the clinic day. After clinic hours, please contact the dentist on call.

Surgical Area(s)



DATE: 8/27/06 *POST-OPERATIVE ORDERS: ORAL SURGERY* 5/06 © University of Minnesota

☐ **FOOD AND DRINK** – Avoid hot or cold foods and drinks for 24 hours. Eat a light diet for 24 hours.

☐ **ORAL HYGIENE** – Do not brush the surgical area for 24 hours. After 24 hours, it is important to resume gentle toothbrushing and flossing to keep the area clean.

☐ **HOW TO REACH US** – If severe pain, swelling, bleeding, or unusual symptoms occur, call our office at once. During regular hours please call 612-827-8310. After hours, you should call 612-827-8400 to reach our dentists on emergency call.

Monitoring

- **Earlier in the day and week is better for everyone**
  - **Everyone is more rested**
  - **More LTC staff available**
  - **Easier to handle problems during regular hours**
- **Follow-up calls**
- **Scheduled return visits**

Pre-arrange Help

Enlist aid from care partners:

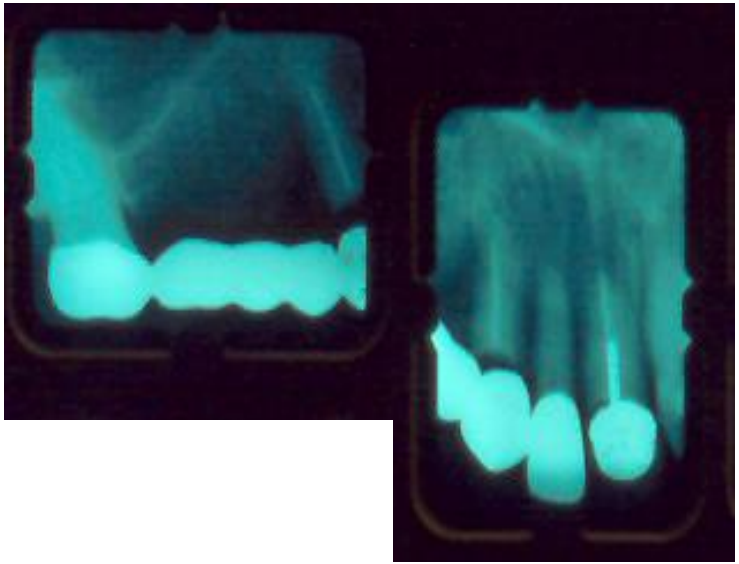
- **Family**
- **Home health providers**
- **Social workers, case managers**
- **Friends**

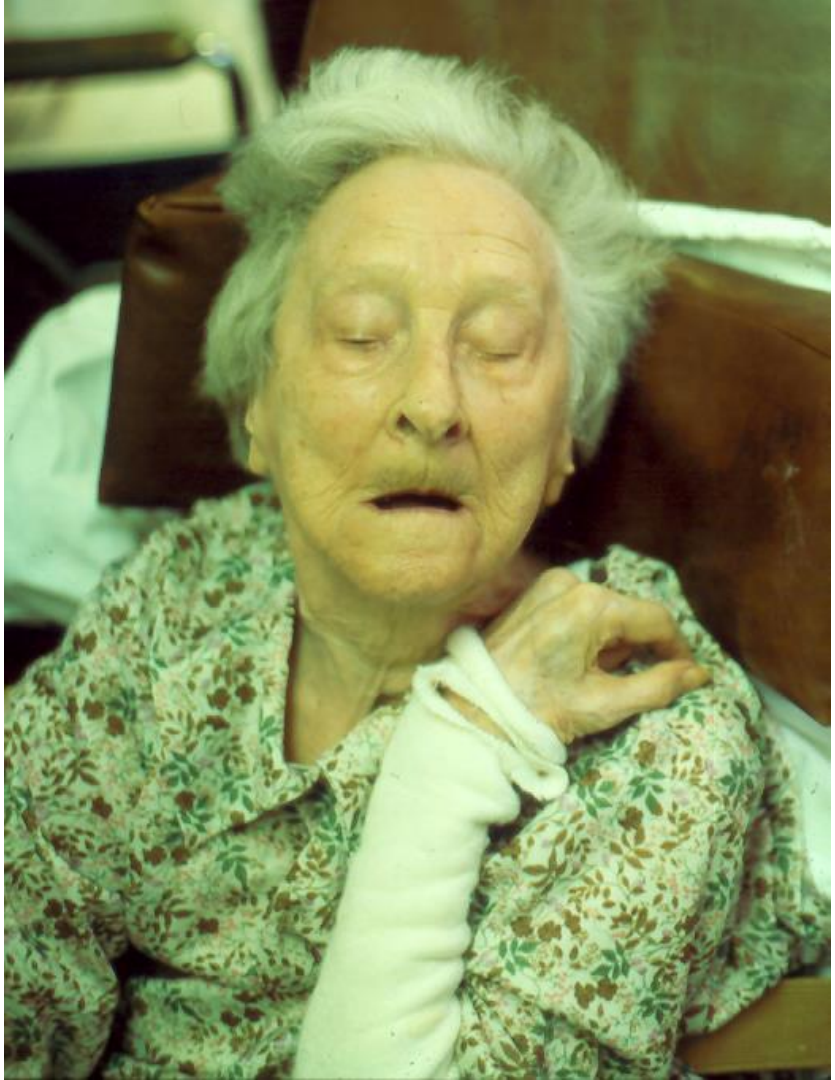
DEMENTIA FRIENDLY DENTAL PRACTICES

Treatment Planning

Patient E.H.

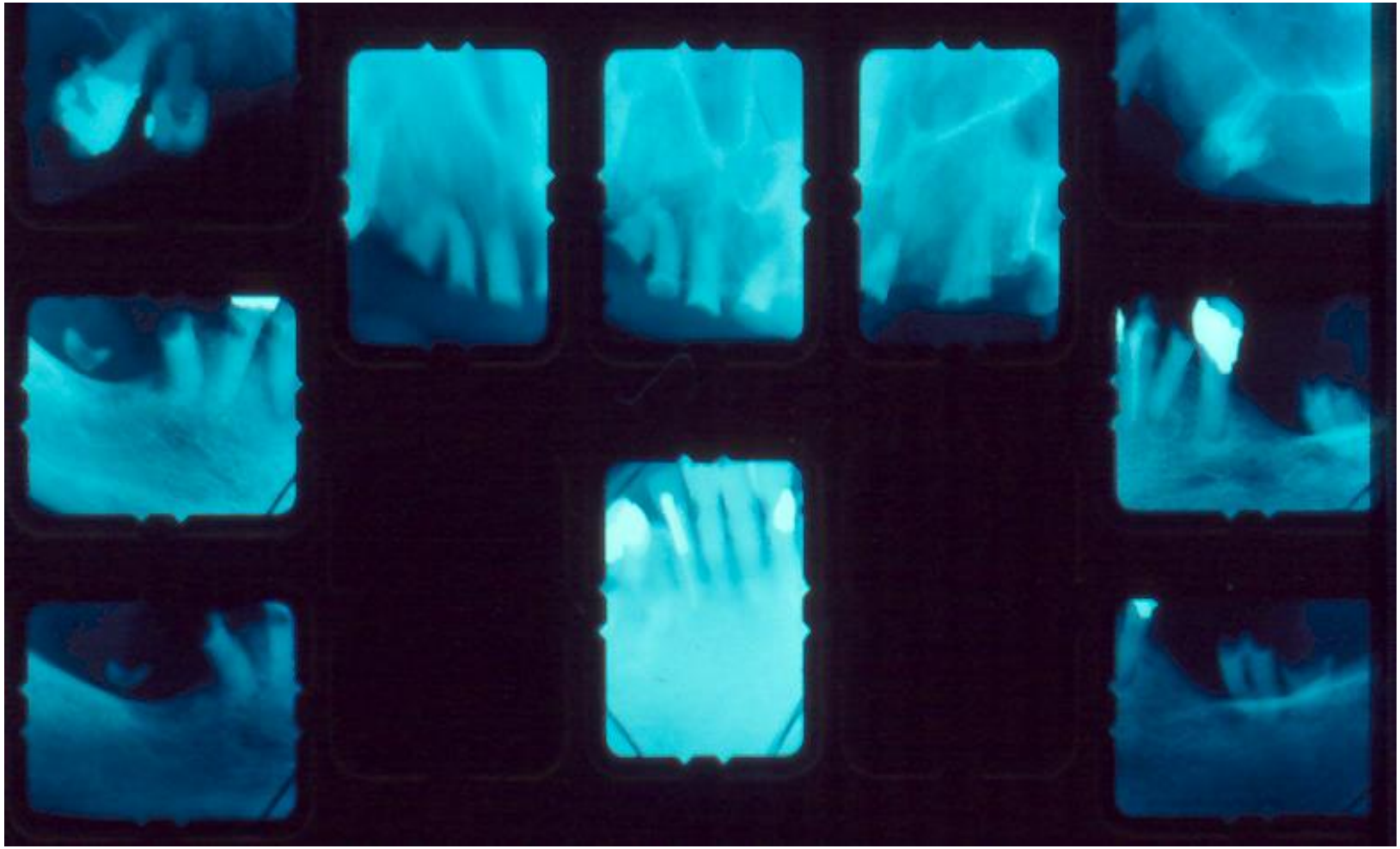
82 y.o. woman from assisted living with fracture of FPD abutment #6 and mid-stage Alzheimer's





Patient C.S.

89 y.o. w/ late stage Alzheimer's. NH staff report pain when spoon touches teeth during feeding; now on large doses of pain medication. "Can anything be done about her teeth?"



Patterns of Tooth Loss in Older Adults with and without Dementia: A Retrospective Study Based on a Minnesota Cohort

Xi Chen[1], *DDS, PhD,** *Stephen K. Shuman, DDS, MS,*† *James S. Hodges, PhD,*‡ *Laël C. Gatewood, PhD,*§ *and Jia Xu, MS*‡

OBJECTIVES: To study tooth loss patterns in older adults with dementia.

DESIGN: Retrospective longitudinal study.

SETTING: A community-based geriatric dental clinic in Minnesota.

PARTICIPANTS: Four hundred ninety-one older adults who presented to the study clinic as new patients during the study period, remained dentate after finishing the initial treatment plan, and returned for care at least once thereafter were retrospectively selected. One hundred nineteen elderly people with *International Classification of Diseases, Ninth Revision*, codes 290.x, 294.1, or 331.2 or a plain-text diagnosis of dementia, Alzheimer's disease, or chronic brain syndrome in the medical history were considered having dementia.

INTERVENTION: All existing dental conditions were treated before enrollment. Dental treatment was continually provided for all participants during follow-up.

MEASUREMENTS: Tooth loss patterns, including time to first tooth loss, number of tooth loss events, and number of teeth lost per patient-year were estimated and compared for participants with and without dementia using Cox, Poisson, and negative-binomial regressions.

RESULTS: Participants with dementia arrived with an average of 18 and those without dementia with an average of 20 teeth; 27% of remaining teeth in the group with dementia were decayed or retained roots, higher than in the group without dementia ($P<.001$). Patterns of tooth loss did not significantly differ between the two groups; 11% of participants in both groups had lost teeth by 12 months of follow-up. By 48 months, 31% of participants without dementia and 37% of participants with dementia had lost at least one tooth ($P=.50$). On average, 15% of participants in both groups lost at least one tooth each year. Mean numbers of teeth lost in 5 years were 1.21 for participants with dementia and 1.01 for participants without dementia ($P=.89$).

CONCLUSION: Based on data available in a community-based geriatric dental clinic, dementia was not associated with tooth loss. Although their oral health was poor at arrival, participants with dementia maintained their dentition as well as participants without dementia when dental treatment was provided. **J Am Geriatr Soc 58:2300–2307, 2010.**

Key words: tooth loss; dementia; older adults

Oral health is a significant concern for older adults with dementia because of its relationship to quality of life, systemic health, and well-being. Impaired oral health not only affects people's quality of life,[1] but also compromises their systemic health[1,2] and increases risk of physical and mental disability.[3–6] Previous studies found that oral health is poor in older adults with dementia. People with dementia have poorer oral hygiene and experience more oral diseases and conditions, such as dental caries, periodontal disease, soft tissue pathology, denture-related problems, and decreased denture use, than those without dementia.[7–19] For instance, one study found that individuals with dementia experienced more coronal and root caries, were less likely to use dentures, and had a greater prevalence of denture-related oral mucosal lesions than those without dementia.[8] In addition to high prevalence of dental caries, annual caries increment was also higher in older adults with dementia.[9,18] In a large-scale longitudinal study, the number of new surfaces affected by caries during a 1-year follow-up of participants with dementia was approximately twice as high as in those without dementia.[9] Type and severity of dementia

From the *Department of Dental Ecology, University of North Carolina, Chapel Hill, North Carolina; and †Department of Primary Dental Care, ‡Division of Biostatistics, and §Health Informatics, Department of Lab Medicine and Pathology, University of Minnesota, Minneapolis, Minnesota.

The abstract of this paper has been submitted and accepted for presentation in the 62nd Annual Scientific Meeting of the Gerontology Society of America.

[1]Dr. Xi Chen was a dental fellow and a PhD student at the University of Minnesota when the work was performed. This work was part of his PhD dissertation.

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DOI: 10.1111/j.1532-5415.2010.03192.x

Outcomes of Dental Care

- Pts with dementia had much poorer oral health than non-demented pts on arrival
- With regular treatment, tooth loss equalized with non-demented pts
- **Conclusion:**
  Dentition can be maintained if good dental care is provided!

Chen, Shuman, et al, JAGS 2010

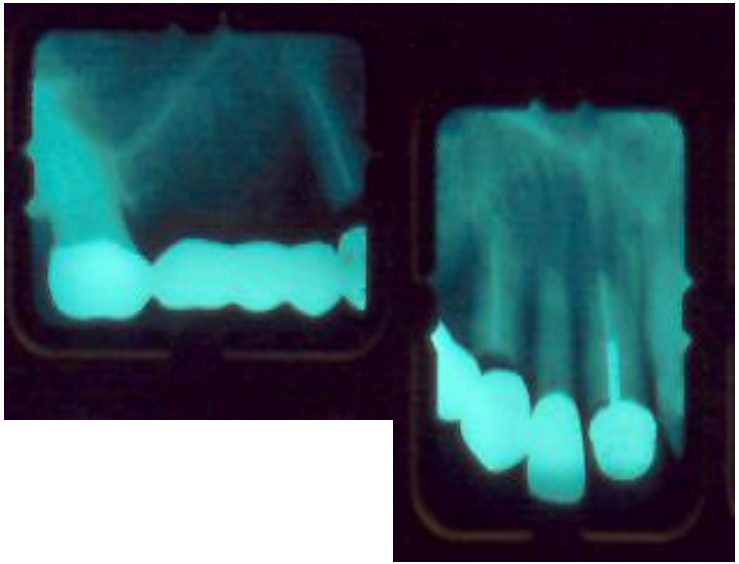
Treatment Planning by Dementia Stage

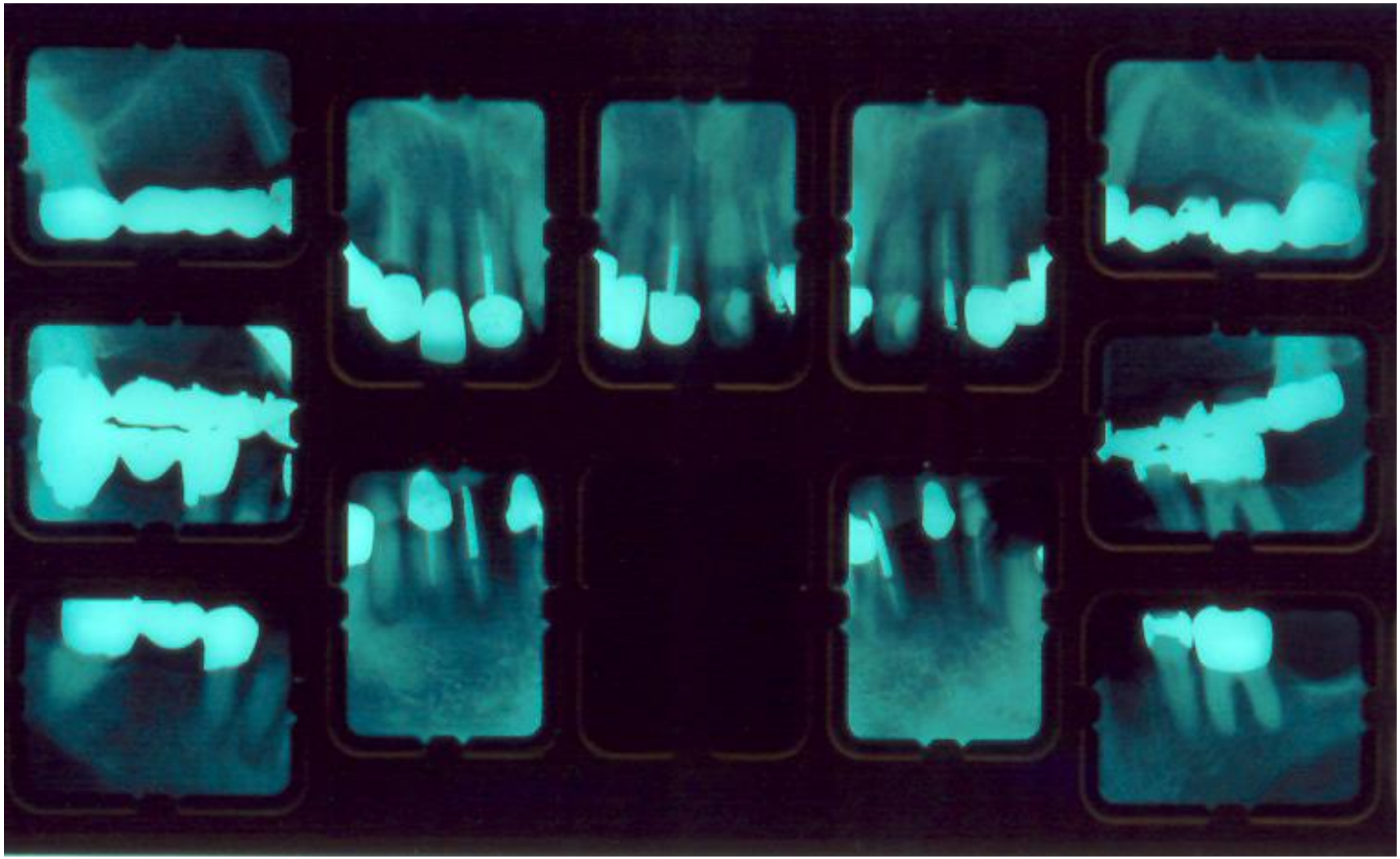
Early Stage	Moderate Stage	Advanced Stage
Minimal changes necessary	Shorter visits More frequent recall Possible anxiolysis or sedation	
Aggressive prevention Good daily hygiene, topical fluorides, care partner education		
Treatment plan anticipating decline	Treatment plan with minimal changes (more difficult decisions)	Maintenance of dentition
Restore ASAP	Simpler interventions: ▪Extract vs. complex rest. ▪Reline/repair vs. new pros. ▪Partials vs. fixed pros.	Palliative care: ▪Maintain comfort, dignity ▪Treat infection ▪Treat symptomatic probs.

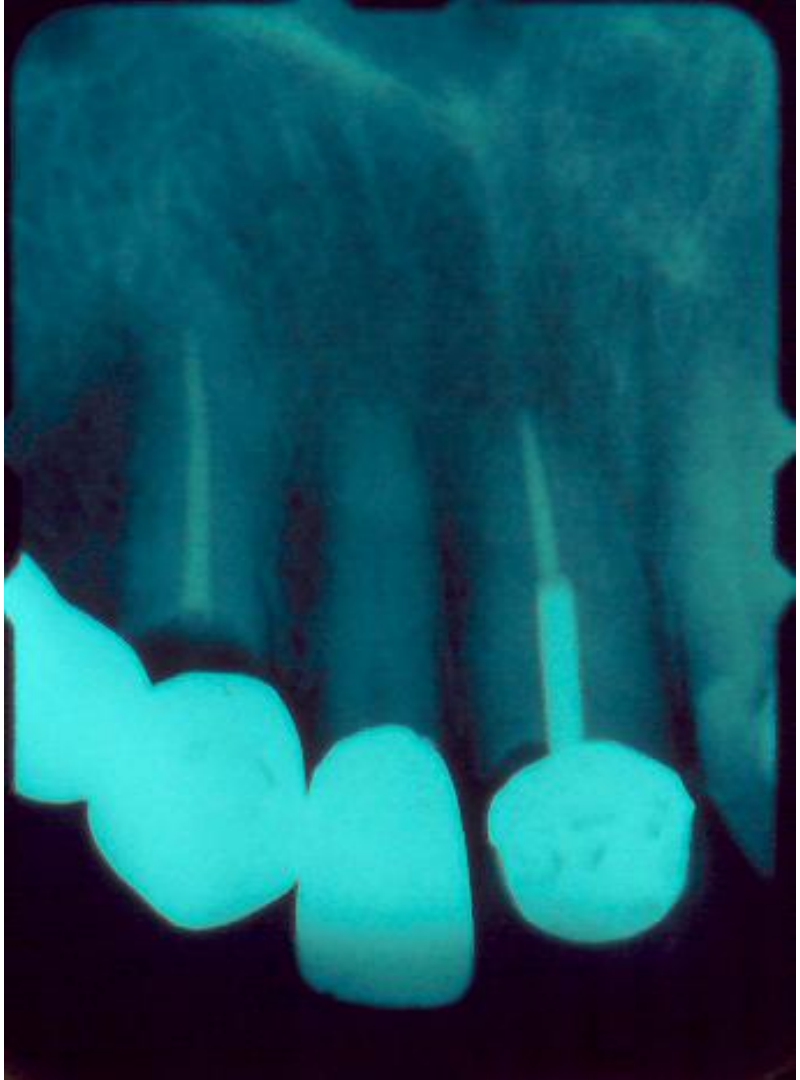
(Adapted from Niessen & Jones, JADA, 1985)

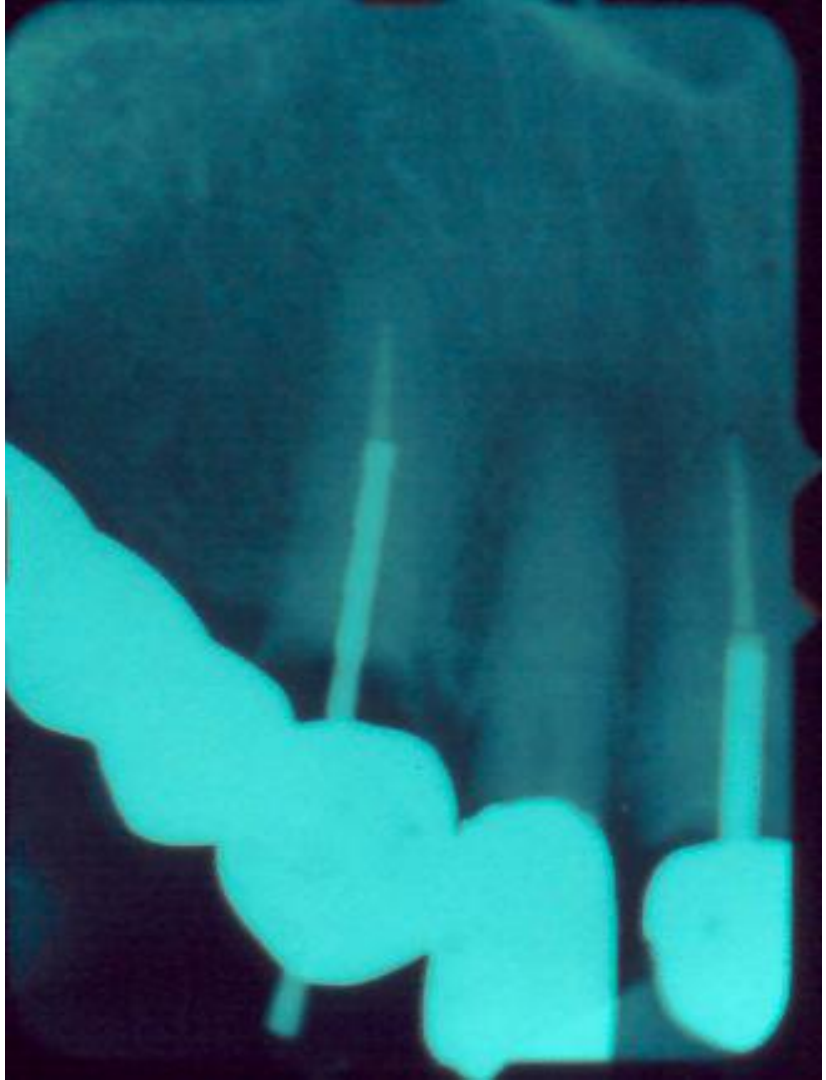
Patient E.H.

82 y.o. woman from assisted living with fracture of FPD abutment #6 and mid-stage Alzheimer's

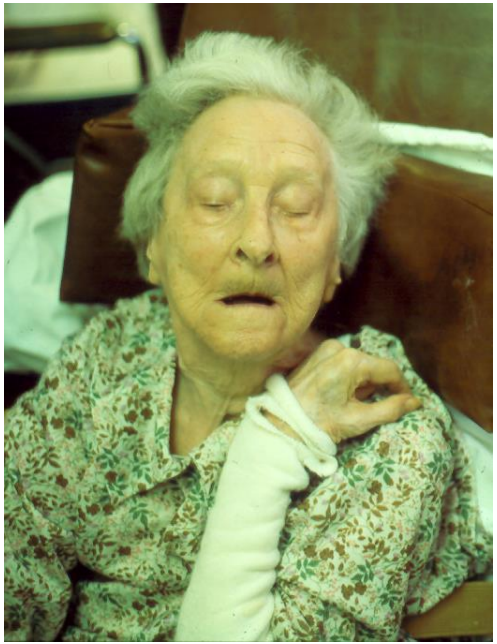


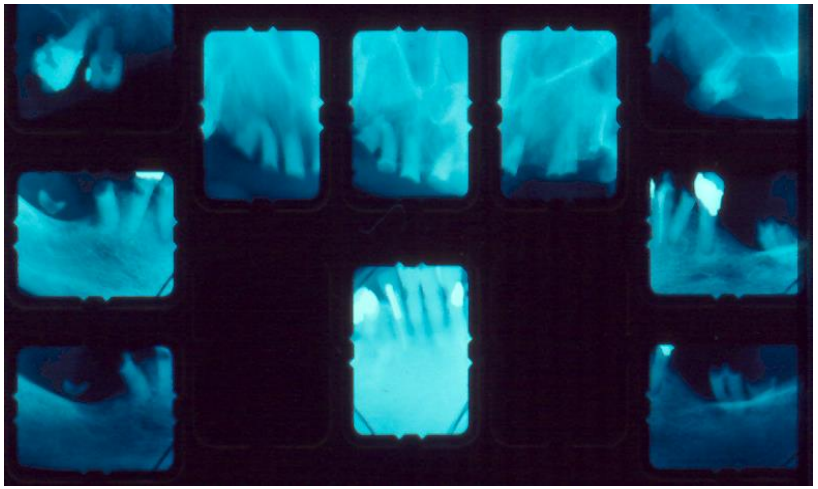






Patient C.S.





- Extracted all remaining fragments, roots & teeth in 4 visits (quadrants)
- Gelfoam® & resorbable sutures

“Dentures or no dentures – that is the question.”

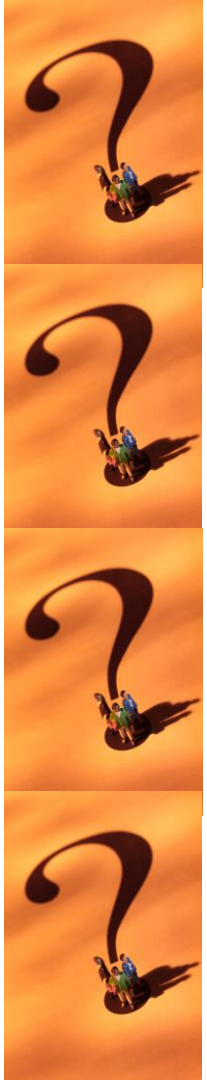
H.G. and M.K.

H.G.

93 y.o. AL resident with dementia. F/P made a few months ago but soon lost and remade per pt/son request. Pt/son have now returned since F/ missing again and they would like another one made.

M.K.

85 y.o. NH resident with dementia. F/F made a year ago to replace lost set. Daughter stops into clinic to report /F now missing and wants replacement. Upset with NH and arguing with them about who should pay for it.



Prosthesis use becomes unpredictable with progression of dementia:

- Declining neuromuscular coordination
- Declining chewing/swallowing function
- Declining awareness, recognition of denture(s)
  - /F use usually lost first
  - F/ use may continue longer
- Some pts with dementia continue using dentures successfully, but hard to predict

Treatment Approaches for Prostheses

- **Preserve teeth & avoid prostheses if possible!**
- **If prostheses must be made:**
  - **1 or 2 abutments still worth keeping to avoid /F (but not a F/!)**
  - **Use easily repairable, adaptable designs**
  - **D/C fabrication if behavior compromises outcome**
  - **Presence of family can reassure patient and educate about potential difficulties**
  - **Adhesives help if used properly**
  - **Consider duplicating new dentures**
- **When in doubt:**
  - **"Therapeutic trial" of dentures OK if parties understand/acknowledge questionable outcome.**
  - **Include in Tx Plan/Consent:**

"Prognosis for successful use of denture(s) is questionable due to patient's cognitive status."

WALKER METHODIST DENTAL CLINIC | *612-827-8310*

CLIENT NAME:

POST-OPERATIVE ORDERS: NEW OR RELINED DENTURES

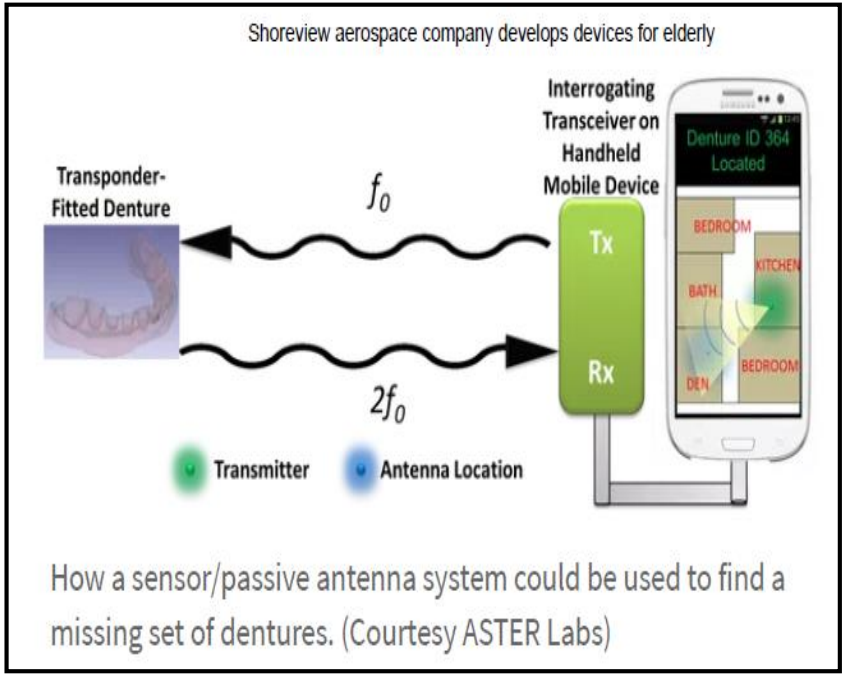
- ☐ **SORE SPOTS** – Sore spots are expected as dentures settle into the soft tissues of the mouth. If the mouth is sore, the following steps can be taken:
  1. Take dentures out and replace the next day.
  2. Rinse gently with warm salt water (1/2 tsp salt in 8 oz. warm water) q 4 h x 2 to 3 days.
  3. Apply an over-the-counter ointment (Benzodent or Orabase with Benzocaine) to sore spots q.i.d. x 3 days.
  4. If sore spots persist for more than 3 days and patient does not already have a scheduled appointment, please call our office to schedule. Please try to insert dentures 24 hours before the adjustment appointment so dentist can see where sore spots are occurring.
- ☐ **DIET** – Choose softer foods for the first week. Gradually introduce new foods as patient gets more comfortable with denture(s). Fibrous, stringy foods such as raw vegetables, many fruits, and steak can be difficult to chew with dentures.
- ☐ **CLEANING** – Dentures should be brushed thoroughly at least once per day with a soft denture brush and a mild soap and water.
- ☐ **SOFT LINERS** – A soft denture liner (clear or white) may be placed to condition the soft tissues or temporarily improve fit. Be careful not to remove it. To clean dentures with soft liners, simply rinse under warm water. DO NOT USE DENTURE CLEANERS.
- ☐ **EXCESS SALIVA** – New dentures may cause extra saliva to be produced. This decreases as the mouth adapts to the new denture(s).
- ☐ **LOOSENESS** – Dentures may feel loose at first. They may move during chewing or speaking until the patient has learned to control them with the muscles of the lips, cheeks and tongue. Looseness can also mean that further adjustment is needed, so please call our office if looseness persists.
- ☐ **BULKINESS** – No matter how thin dentures are, they may feel bulky at first. Time is needed to get used to this feeling.
- ☐ **COGNITIVELY IMPAIRED PATIENTS** – Patients with impairment (e.g., dementia) may have difficulty wearing dentures and may remove them, break them, or lose them. Please call our office if such problems are noted.
- ☐ **HOW TO REACH US** – If there are questions or concerns with new or relined dentures from our office, please call us at 612-827-8310 during normal clinic hours.

SIGNATURE: _____

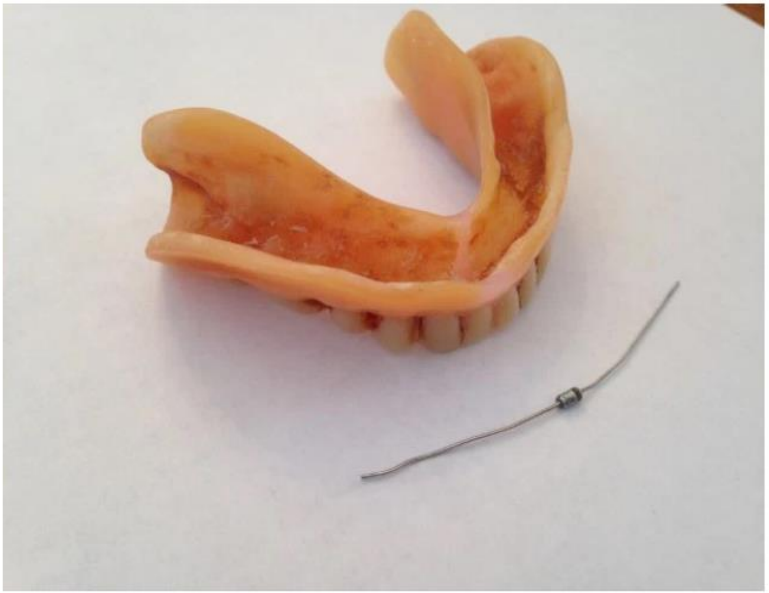
DATE:

Miniature Passive Device for Locating Lost Dentures in Care Facilities: Phase II Trial

(ASTER Labs and UMN OHSOA Program, NIH/NIDCR 2R44 DE026377-02)



How a sensor/passive antenna system could be used to find a missing set of dentures. (Courtesy ASTER Labs)



An antenna like this could be embedded into dentures to help find them when they get lost thanks to a project being worked on by a University of Minnesota professor and a Shoreview research company. (Pioneer Press: Richard Chin)

Restorative Tactics

Remineralization

- **Fluoride CLEARLY works!!**
- **Some evidence of benefit from CPP-ACP products, but not yet conclusive[1,2]**
  - **Recaldent®, MI Paste®, etc.**
  - **CPP-ACP: casein phosphopeptide – amorphous calcium phosphate (from milk)**
  - **Further research needed**
- ***Adherence is key for all regimens!!***

[1]Azarpazhooh & Limeback, JADA, 2008

[2]ADA Council on Scientific Affairs, 2011

Silver Diamine Fluoride

- **FDA clearance only for hypersensitivity**
  - **…but useful for caries control, management & now has ADA code**
- **Originally used in kids; more recent evidence for root caries in adults[1,2]**
- **Single application may be insufficient for long-term benefit[3]**
- **Adverse effects:**
  - **Black staining**
  - **Soft tissue irritation**
  - **Metallic taste**
- **Tooth defects & sequelae remain**

ADA Code D1354
(Interim caries arresting **medicament application)**

[1]Li, et al, J Dent 2016; [2]Zhang, et al, Caries Res 2013; [3]Horst, et al, J Calif Dent Assoc 2016

- First on US market
- 38% SDF
- 1-step application

- SDF + KI combo
- 2-step procedure
- SDF + KI = AgI (precipitates Ag to reduce black stain)

Restorative Choices

- **Glass Ionomer:**
  - **If field controllable**
  - **Also as interim restoration or base**
  - **<u>Clinical</u> benefit of fluoride release appears minimal***
- **Composite:**
  - **If field controllable**
  - **For larger restorations**
  - **For esthetics and strength**
- **Amalgam:**
  - **If field harder to control**
  - **Spherical cut**

*Wiegand, et al., Dent Materials, 2007

COVER STORY

ARTICLE 1

ALZHEIMER'S DISEASE, DENTAL AMALGAM AND MERCURY

STANLEY R. SAXE, D.M.D.; MERLE W. WEKSTEIN, M.P.A.; RICHARD J. KRYSCIO, PH.D.; ROBERT G. HENRY, D.M.D.; CHARLES R. CORNETT, PH.D.; DAVID A. SNOWDON, PH.D.; FORD T. GRANT, D.M.D.; FREDERICK A. SCHMITT, PH.D.; SARA JEAN DONEGAN, S.S.N.D., D.M.D.; DAVID R. WEKSTEIN, PH.D.; WILLIAM D. EHMANN, PH.D.; WILLIAM R. MARKESBERY, M.D.

Alzheimer's disease, or AD, is a major health problem in late adult life and affects up to 4 million people in this country.[1] The etiology and pathogenesis of this disease are not known. Levels of numerous trace elements, including aluminum, iron, zinc and mercury, or Hg, have been reported to be imbalanced in patients with AD,[2] and it has been speculated that this imbalance may play a role in the disease. Hg levels have been reported to be elevated in some brain regions in patients with AD and in the microsomal subfraction in several studies of patients with AD and age-matched control subjects.[3-5] Hg is a neurotoxin, with metallic Hg causing erethism[6,7] and methyl mercury causing Minamata

ble toxic effects has been the result of scientific literature reports on Hg vapor and cell function[21]; on correlations between dental amalgam and reported symptoms[22,23]; and Hg levels in blood, urine and organs, including the brain.[24-32] It also has been stimulated by media reports suggesting adverse health effects.[33]

We conducted an investigation to determine the relationship among brain Hg levels, AD and dental amalgam exposure.

al status of the brain or the presence of AD.

Results. The authors found no significant association of AD with the number, surface area or history of having dental amalgam restorations. They also found no statistically significant differences in brain Hg level between subjects with AD and control subjects.

Conclusions. Hg in dental amalgam restorations does not appear to be a neurotoxic factor in the pathogenesis of AD. The authors found that brain Hg levels are not associated with dental amalgam, either from existing amalgam restorations or according to subjects' dental amalgam restoration history.

Clinical Implications. Dental amalgam restorations, regardless of number, occlusal surface area or time, do not relate to brain Hg levels.

Conclusions. Hg in dental amalgam restorations does not appear to be a neurotoxic factor in the pathogenesis of AD. The authors found that brain Hg levels are not associated with dental amalgam, either from existing amalgam restorations or according to subjects' dental amalgam restoration history.

FDA changes stance on dental amalgam

Back to news International

By Jeremy Booth, Dental Tribune International

November 03, 2020

WHITE OAK, Md., U.S.: The U.S. Food and Drug Administration (FDA) has updated its guidance for the use of dental amalgam in tooth restorations. The agency said in September that the use of dental amalgam should be avoided whenever possible in certain groups, such as in pregnant women, women who are planning to become pregnant, in children and in people with certain preexisting neurological diseases.

Source: FDA Statement on Dental Amalgam, 9/2020)

As detailed in its September statement, the FDA's new position on the use of dental amalgam is that its use may pose a greater risk for potential harmful health effects for certain groups, and it therefore recommends that its use in these groups be avoided "whenever possible and appropriate".

These groups are:

- pregnant women and their developing fetuses;
- women who are planning to become pregnant;
- nursing women and their newborns and infants;
- children, especially those younger than 6 years of age;
- people with preexisting neurological disease such as multiple sclerosis, Alzheimer's disease and Parkinson's disease;
- people with impaired kidney function; and
- people with known heightened sensitivity (allergy) to mercury or other components of dental amalgam.

No difference in caries outcome between resin-modified glass ionomer cements and resin-based composites

A critical summary of Yengopal V, Mickenautsch S. Caries-preventive effect of resin-modified g… eview. Eur A… P…

authors searched five databases to identify prospective clinical two-arm studies published through July 2010. A two-arm clinical trial is a randomized controlled clinical trial in which investigators evaluate two treatment modalities; the participants are allocated to the two treatment groups randomly and are followed up to ascertain treatment effects. The authors searched only articles published in the English language. They included studies in which researchers compared caries adjacent to RM-GIC and RBC restorations or orthodontic adhesives;

…w-up time … six months, 12 … 18 months, 24 …nths) from … 24 data sets, …nce in caries …e two …even data sets …rials showed …tatistically sig- …ntive effect … trials showed …maining … restored with …cent higher for …wo to three …manent teeth …teeth restored

quality of ev…nce as well as the risk of bias.

Main results. Th… authors' preliminary search yielde… 289 articles; they narrowed those down to six acceptable trials by applying inclusion and exclusion criteria. The authors' primary aim was to assess the caries-preventive effect of RM-GIC and RBC quantitatively; therefore, they extracted data from the six trials and categorized them into 24 dichotomous data sets. They did this by separating tooth groups (incisors, canines, premolars and molars, as well as primary and permanent

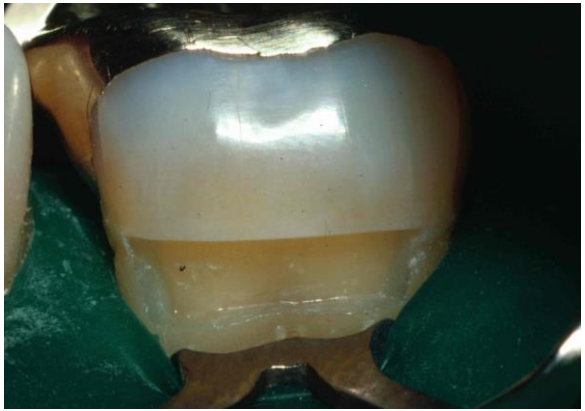
with RBC. This caries-preventive effect lasted for 24 months in the absence of an external fluoride exposure ($P = .02$) and 18 months in the presence of an external fluoride exposure ($P = .04$).

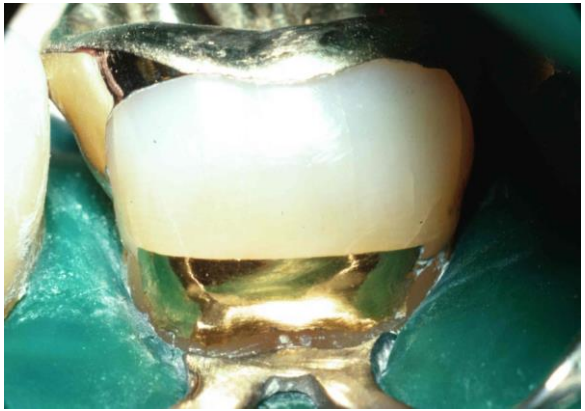
Conclusions. The overall results showed there was no difference in the caries-preventive effects of RM-GIC and RBC, although the results of two of six trials showed RM-GIC to have somewhat more caries-preventive benefit than RBC.

No sources of funding for this systematic review were listed.

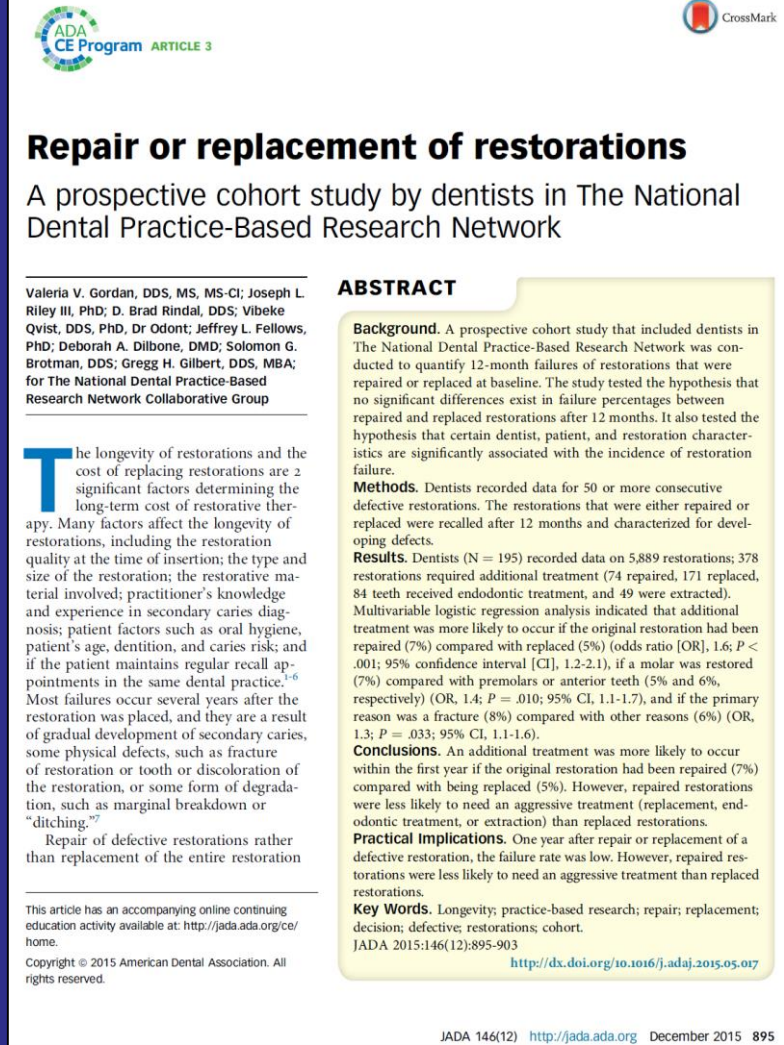
Dr. Ritwik is an associate professor and the director, Graduate Program in Pediatric Dentistry, School of Dentistry, Louisiana State University, New Orleans. She also is an evidence reviewer for the American Dental Association. Address reprint requests to Dr. Ritwik at Department of Pediatric Dentistry, School of Dentistry, Louisiana State University, 1100 Florida Ave., Box 139, New Orleans, La. 70119, e-mail PRitwi@lsuhsc.edu.

Bottom line:
Most materials work fine if well placed…





…but ALL materials will fail if risk factors remain uncontrolled.



ADA CE Program ARTICLE 3

CrossMark

Repair or replacement of restorations

A prospective cohort study by dentists in The National Dental Practice-Based Research Network

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The longevity of restorations and the cost of replacing restorations are 2 significant factors determining the long-term cost of restorative therapy. Many factors affect the longevity of restorations, including the restoration quality at the time of insertion; the type and size of the restoration; the restorative material involved; practitioner's knowledge and experience in secondary caries diagnosis; patient factors such as oral hygiene, patient's age, dentition, and caries risk; and if the patient maintains regular recall appointments in the same dental practice.[1-6] Most failures occur several years after the restoration was placed, and they are a result of gradual development of secondary caries, some physical defects, such as fracture of restoration or tooth or discoloration of the restoration, or some form of degradation, such as marginal breakdown or "ditching."[7]

Repair of defective restorations rather than replacement of the entire restoration

This article has an accompanying online continuing education activity available at: http://jada.ada.org/ce/home.

ABSTRACT

Background. A prospective cohort study that included dentists in The National Dental Practice-Based Research Network was conducted to quantify 12-month failures of restorations that were repaired or replaced at baseline. The study tested the hypothesis that no significant differences exist in failure percentages between repaired and replaced restorations after 12 months. It also tested the hypothesis that certain dentist, patient, and restoration characteristics are significantly associated with the incidence of restoration failure.

Methods. Dentists recorded data for 50 or more consecutive defective restorations. The restorations that were either repaired or replaced were recalled after 12 months and characterized for developing defects.

Results. Dentists (N = 195) recorded data on 5,889 restorations; 378 restorations required additional treatment (74 repaired, 171 replaced, 84 teeth received endodontic treatment, and 49 were extracted). Multivariable logistic regression analysis indicated that additional treatment was more likely to occur if the original restoration had been repaired (7%) compared with replaced (5%) (odds ratio [OR], 1.6; $P < .001$; 95% confidence interval [CI], 1.2-2.1), if a molar was restored (7%) compared with premolars or anterior teeth (5% and 6%, respectively) (OR, 1.4; $P = .010$; 95% CI, 1.1-1.7), and if the primary reason was a fracture (8%) compared with other reasons (6%) (OR, 1.3; $P = .033$; 95% CI, 1.1-1.6).

Conclusions. An additional treatment was more likely to occur within the first year if the original restoration had been repaired (7%) compared with being replaced (5%). However, repaired restorations were less likely to need an aggressive treatment (replacement, endodontic treatment, or extraction) than replaced restorations.

Practical Implications. One year after repair or replacement of a defective restoration, the failure rate was low. However, repaired restorations were less likely to need an aggressive treatment than replaced restorations.

Key Words. Longevity; practice-based research; repair; replacement; decision; defective; restorations; cohort.

JADA 2015:146(12):895-903

http://dx.doi.org/10.1016/j.adaj.2015.05.017

Repair or replace?

- Studies suggest repairs work OK
- National PBRN Study:
  - Low 1 year failure rates for repairs
  - Additional tx slightly more likely in repair (7%) vs. replacement (5%)
  - But repairs less likely to need aggressive f/u tx (e.g., replacement, endo, extraction)

(Gordan, Riley, et al, JADA 2015)

Composite Crown Forms

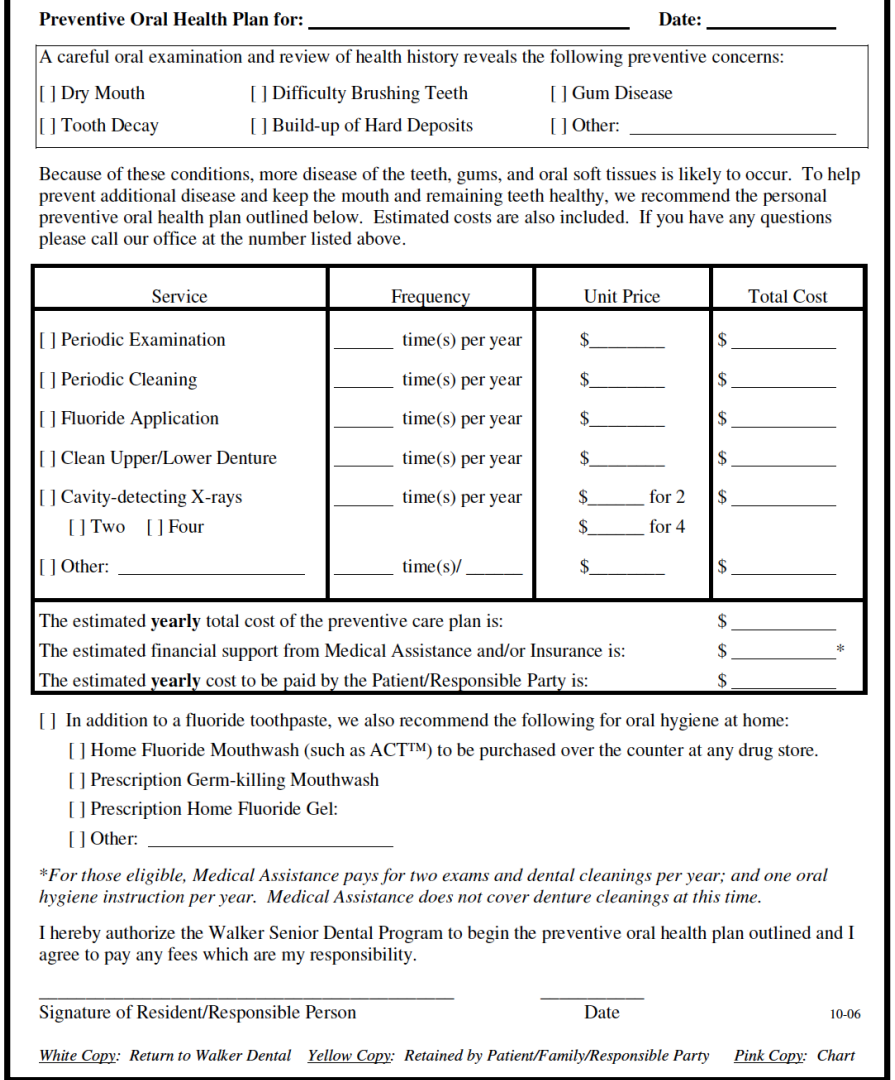
Atraumatic Restorative Treatment (ART)

- Approach
  - No or minimal anesthesia
  - Excavate with hand instruments & possibly slow speed
  - Aim for clean margins; OK to leave affected (and maybe some infected) dentin
  - Place resin-modified glass ionomer
- Evidence
  - History of success in children with caries
  - Mounting evidence of success in older & disabled adults
  - Good 1-5 year outcomes in well-designed clinical studies[1,2,3,4,5]
- Can be helpful in disabled/frail adults with limited treatment tolerance

[1]Lo, et al., JDR 85, 2006; [2]da Mata, et al., CDOE 42, 2014; [3]Gil-Montoya, et al., Clin Oral Investig 18, 2014; [4]Molina, et al., BMC Oral Health 14, 2014; [5]da Mata, et al., J Dent 83, 2019

Preventive Treatment Plan

- Gives preventive care the attention it deserves!
- Used for both community and LTC residents
- 3-copy printing
  - 1 for office when issued
  - 2 for signature (1 to return and 1 to keep)



Preventive Oral Health Plan for: _____ **Date:** _____

A careful oral examination and review of health history reveals the following preventive concerns:

[ ] Dry Mouth [ ] Difficulty Brushing Teeth [ ] Gum Disease
[ ] Tooth Decay [ ] Build-up of Hard Deposits [ ] Other: _____

Because of these conditions, more disease of the teeth, gums, and oral soft tissues is likely to occur. To help prevent additional disease and keep the mouth and remaining teeth healthy, we recommend the personal preventive oral health plan outlined below. Estimated costs are also included. If you have any questions please call our office at the number listed above.

Service	Frequency	Unit Price	Total Cost
[ ] Periodic Examination	_____ time(s) per year	$_____	$ _____
[ ] Periodic Cleaning	_____ time(s) per year	$_____	$ _____
[ ] Fluoride Application	_____ time(s) per year	$_____	$ _____
[ ] Clean Upper/Lower Denture	_____ time(s) per year	$_____	$ _____
[ ] Cavity-detecting X-rays [ ] Two [ ] Four	_____ time(s) per year	$_____ for 2 $_____ for 4	$ _____
[ ] Other: _____	_____ time(s)/ _____	$_____	$ _____

The estimated **yearly** total cost of the preventive care plan is: $ _____
The estimated financial support from Medical Assistance and/or Insurance is: $ _____*
The estimated **yearly** cost to be paid by the Patient/Responsible Party is: $ _____

[ ] In addition to a fluoride toothpaste, we also recommend the following for oral hygiene at home:
[ ] Home Fluoride Mouthwash (such as ACT™) to be purchased over the counter at any drug store.
[ ] Prescription Germ-killing Mouthwash
[ ] Prescription Home Fluoride Gel:
[ ] Other: _____

**For those eligible, Medical Assistance pays for two exams and dental cleanings per year; and one oral hygiene instruction per year. Medical Assistance does not cover denture cleanings at this time.*

I hereby authorize the Walker Senior Dental Program to begin the preventive oral health plan outlined and I agree to pay any fees which are my responsibility.

_____ _____
Signature of Resident/Responsible Person Date

10-06

White Copy: Return to Walker Dental Yellow Copy: Retained by Patient/Family/Responsible Party Pink Copy: Chart

Dementia friendly dental practice includes care partner support!

Two Doorways to Info & Support

1. **North Dakota Aging & Disability Resource Link**
   - **https://carechoice.nd.assistguide.net/**
   - **Toll Free: 1-855-462-5465 | ND 711 (TTY)**

2. **Alzheimer's Association**
   - **1-800-272-3900 or www.alz.org**
   - **National organization with MN-ND Chapter**
   - **Helpline available 24/7**

Take Home Messages

- **Dementia will be among the most common chronic diseases in adult dental practice.**
- **Most dental care can be provided safely & effectively with some knowledge of the disease process and basic management strategies.**
- **Dental professionals will need to become more comfortable recognizing and managing dementia pts and supporting care partners (that is, dementia friendly!)**
- **Community partners are ready to help!**

Get Involved…

Advanced Training for Clinical Staff

The Dementia Friendly Dental Practices Advanced Training Program is a 6-hour (6 CEU) in-depth curriculum for clinical dental providers covering dementia recognition and assessment, environment and safety issues, ethical and legal concerns, patient management strategies, treatment planning, and patient/care partner support.

Request Advanced Training

http://www.actonalz.org/dental-practice-tools

Thank You!

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