



Important Notice

This is one of a series of ethical dilemmas published in the *Texas Dental Journal* between 1993 and 2005. The lead author of these dilemmas, Dr. Thomas K. Hasegawa, died tragically in 2005. The dilemmas remain an important legacy for dentistry.

Format

Each ethical dilemma was originally introduced in one issue of the *Texas Dental Journal* with the question, “What would you do?” The more expansive analysis of the dilemma was presented in a subsequent issue. The second page of this file depicts the cover of the issue containing the analysis of the dilemma, not the issue containing the briefer introduction to the dilemma. The ethical dilemmas were compiled for digital use by the American College of Dentists in 2008.

Purpose

This ethical dilemma and the other dilemmas in the series are only meant to further your knowledge and understanding of dental ethics by presenting, discussing, and analyzing hypothetical ethical dilemmas that may occur in dental settings. The dilemmas are not intended to: a) provide legal advice; b) provide advice or assistance in the diagnosis or treatment of dental diseases or conditions; or c) provide advice or assistance in the management of dental patients, practices, or personnel.

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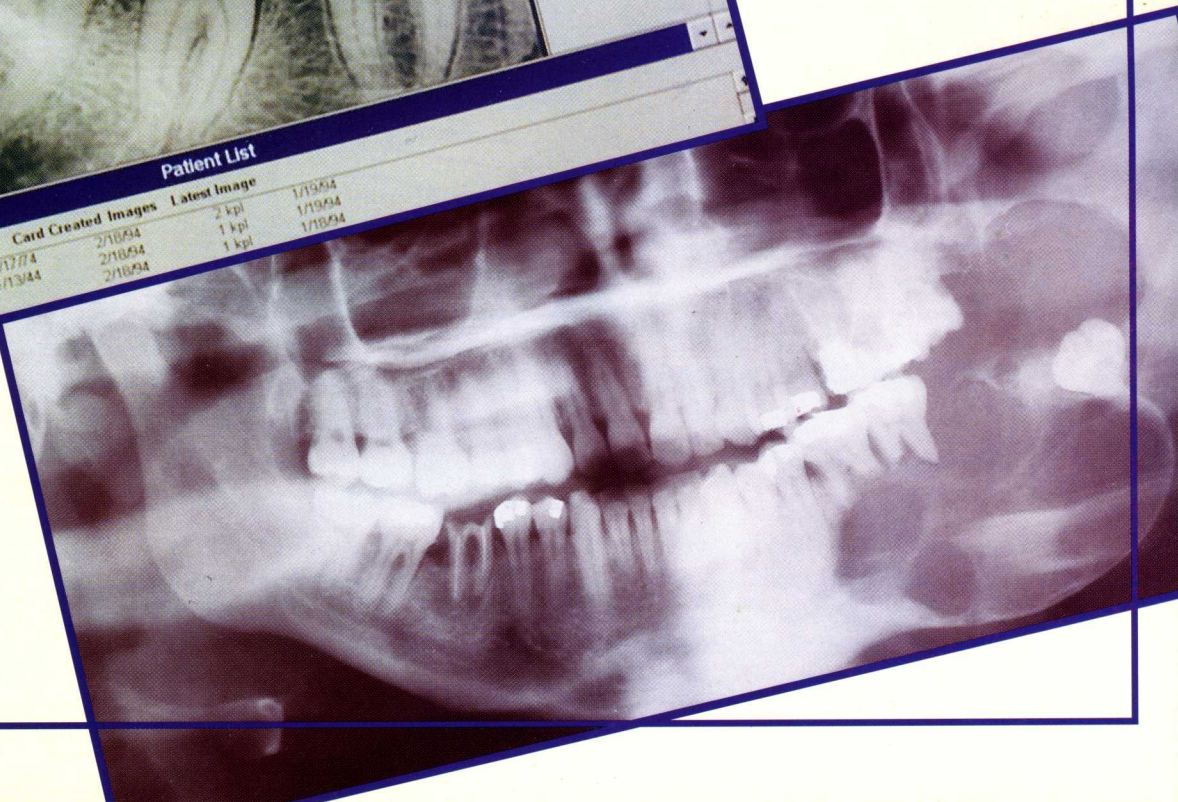
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February 1995

TEXAS DENTAL Journal

**Imaging
in
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Ethical Dilemma

pair and subsequently combat infection. An invasive surgical procedure may cause ORN because the bone is subject to tissue breakdown that may result in a non-healing wound. Osteoradionecrosis is a problem of wound healing rather than infection, (3) and if the extraction is necessary for Mr. Finley, precautions to minimize the risk includes: 1) prophylactic antibiotic therapy; 2) achieving primary closure of the surgical site and eliminating sharp ridges; and 3) the possible use of hyperbaric oxygen therapy (HBO) before and after the surgery.

Although proper preventive dental treatment will not eliminate the possibility of ORN, the failure to follow these recommendations may result in an adverse result for the patient and a lawsuit for the dentist. ORN may be a severely debilitating condition resulting in skeletal deformity. The *ADA News* this year

reported a \$2.96 million settlement made by a Florida jury to a dental patient who developed ORN after dental extractions. The lawsuit charged the defendants with "negligent failure to consult with or refer to an oral surgeon, negligent dental extraction, negligent supervision of surgical site and negligent failure to obtain informed consent for the extraction." (6) To practice competently, dentists must continue to improve the care they deliver through education, training and research, and to keep their knowledge and skill current. (7)

It is equally important that all health professionals, including radiation oncologists, keep their knowledge and skills current. What is the importance of the doctor-patient relationship in this case, especially when the dentist was not involved in proper preventive dental therapy before RT?

Trust in the Doctor-Patient Relationship

Trust is an essential part of the doctor-patient relationship. We have mentioned in earlier cases how trust, unlike other relationships that must be earned, is assumed when we become patients of a health care professional. In our case, this trust has been violated, and the patient and dentist must deal with the fear of uncertainty about risks that may have been avoided.

In Mr. Finley's case, we make an assumption that medicine has failed to address the oral conditions that may have prevented this fearful situation, although this can only be confirmed by contacting the radiation oncologist. If this assumption is correct, then the question is how to inform the patient that this preventable situation was not properly addressed without breaking the trust

What Would You Do?

Ethical Dilemma #16

Carole Walker is a 35-year-old high school English teacher and is a new patient in your general practice in a large metropolitan city in Texas. She is in good general and oral health and her previous care consisted of small amalgam and resin restorations. She has come to your office because another teacher has recommended you, even though she must drive 45 minutes to your office. You have been in practice now for four years and enjoy the location and the growth of your practice.

One of her concerns is sensitivity to cold and when she brushes her teeth in the upper right canine area. She has a cervical abrasion into dentin on the facial surface of tooth #6. She has a clinically sound disto-lingual amalgam on #6 that was placed several years ago. The treatment plan is for Class V resin and you isolate, prepare, etch, place and polish the restoration. She is pleased with the appearance of the restoration and with the appointment.

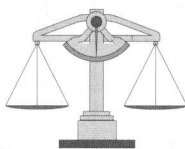
That evening she calls you and she is in acute pain that started three hours after the appointment and has been "throbbing" for the last two hours. She is angry and disappointed and asks, "Why didn't you tell me this could happen?" You prescribe analgesics and see her the next day and determine that she has an irreversible pulpitis that will require root canal therapy. You try to explain to her that this dramatic response to the placement of small resin restorations rarely happens, but she is now upset because she has heard "horror stories" about root canals and she asks, "Why should I pay the extra expense if I wasn't informed about the possibility of this happening?"

You are now faced with an ethical dilemma. Check the course(s) of action that you would follow and mail or fax this page, or a note indicating your recommendation, as instructed below.

1. ☐ Refer her to an endodontist for evaluation and treatment at her expense.
2. ☐ Refer her to an endodontist for evaluation and treatment at your expense.
3. ☐ Proceed with the root canal at her expense.
4. ☐ Proceed with the root canal at your expense.
5. ☐ If she continues to be upset, discontinue her as a patient.
6. ☐ Other alternative (please explain) _____.

SEND YOUR RESPONSE BY **JANUARY 7, 1994** ATTENTION:

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Ethical Dilemma

Carole's Unexpected Pulpitis

Response to Ethical Dilemma #16

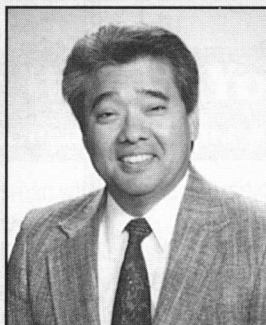
Carole Walker (complete case in the December, 1994, *TDA Journal*) is a 35 year-old high school English teacher and is a new patient in your general practice in a large metropolitan city in Texas. She is in good general and oral health and her previous care consisted of small amalgam and resin restorations. She has come to your office because another teacher has recommended you, even though she must drive 45 minutes to your office. You have been in practice now for four years and enjoy the location and the growth of your practice.

One of her concerns is sensitivity to cold when she brushes her teeth in the upper right canine area. She has a cervical abrasion into dentin on the facial surface of tooth #6. She has a clinically sound distolingual amalgam on #6 that was placed several years ago. The treatment plan is for a Class V resin and you isolate, prepare, etch, place, and polish the restoration. She is pleased with the appearance of the restoration and with the appointment.

That evening she calls you and she is in acute pain that started three hours after the appointment and has been "throbbing" for the last two hours. She is angry and disappointed and asks, "Why didn't you tell me this could happen?" You prescribe analgesics and see her the next day and determine that she has an irreversible pulpitis that will require root canal therapy. You try to explain to her that this dramatic response to the placement of small resin restorations rarely happens, but she is now upset as she has heard "horror

TDA Council on Ethics and Judicial Affairs

By Thomas K. Hasegawa, Jr., D.D.S.
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Hasegawa

stories" about root canals. She asks, "Why should I pay the extra expense if I wasn't informed about the possibility of this happening?"

Dentists who responded to this ethical dilemma chose four of the options including: 1) refer her to an endodontist for evaluation and treatment at her expense (option #1); 2) proceed with the root canal at her expense (option #3); or 3) proceed with the root canal at your expense (option #4). Respondents also offered alternative actions for Carole's case (option #6). **None** of the respondents chose to refer her to an endodontist at your expense (option #2), or to discontinue her as a patient if she continued to be upset (option #5). **There was no consensus by the respondents as to who should complete the root canal and who should be responsible financially for this treatment.**

Unlike other areas of medicine, most dental surgery is performed on conscious patients, who, in most cases, can immediately inspect completed care. Patients may even be asked for their input during a procedure, such as approving the esthetics of a fixed partial denture or the phonetics of a removable patient denture. Although most of the technical details of dental procedures are beyond the patients' understanding, they can readily view and critique the form, function, and esthetics of dental care. Carole's case requires us to review the possible sources of irreversible pulpitis following dental composite treatment and to discuss informed consent and whether she was adequately informed about the risks of dental treatment.

Dental Composite Controversies

Carole's painful response following the placement of a dental composite restoration reinforced the need to consider potential complications due to existing clinical conditions and pulpal status, and the technique sensitivity of dental materials. While composites are increasing in importance, especially with the emphasis on esthetic or cosmetic dentistry, (1,2) the complexities of selecting materials and technique "have hindered their full success (3)."

Carole has had a history of hypersensitivity to cold and tooth brushing in an area of cervical abrasion on a maxillary canine that has been previously restored on the distal surface. Factors that may affect hypersensitivity following a composite restoration include: the preoperative pulpal status of the

Ethical Dilemma

tooth, amount of sclerotic or "secondary," and reparative, or "tertiary," dentin, (4) the remaining dentin thickness (RDT), caries, and lack of enamel at the gingival margin (5). Regarding the pulpal status, an endodontist wrote, "preparing a Class V will, in all likelihood, irritate an already hyperemic pulp."

There are a number of technical considerations that could affect the management of Carole's canine. First, the extent of the preparation could range from: 1) conventional Class V preparation typically used for

cariously involved teeth that includes retention grooves in dentin; 2) convention Class V cavity preparation with cementum involvement where the gingival margin is a butt joint with a dentinal retention groove with no bevel gingivally, to 3) a modified Class V preparation for abraded teeth that includes roughening the internal cavity walls, beveling all enamel margins, and a retention groove in the non-enamel margin(s) (5,6). If the RDT is less than 0.5-mm, a calcium hydroxide liner should be used, although it is recommended

that the use of liners and bases should be limited to allow the bonding systems to attach to more dentin (3). Total etching of enamel and dentin with phosphoric acid has been recommended; however, there is a concern for over-etching dentin either by too high a concentration of the etchant or too long a period of exposure (7). Dentin etching or conditioning removes or modifies the smear layer on the dentin surface while also demineralizing the outer layers of dentin between the tubules (3), and requires a weaker acid, such

What Would You Do?

Ethical Dilemma #18

Otto Norman is a 40 year-old private businessman who has had sporadic dental care in the past but has come to your general practice because he wants to keep his teeth "for a lifetime."

He is in good health, all vital signs are excellent, he exercises regularly and is careful about his diet. His periodontal health is good, he has a Class 1 occlusion, and he needs replacement of three anterior composite resins and four amalgams, and five fixed prosthodontic units on the mandibular arch to replace large, faulty restorations. He also has a partially erupted, mesioangular, Class 1, crown-to-crown impacted mandibular third molar, that is in contact with a second molar that has a full gold crown, endodontics, and a core build-up that appears sound clinically and radiographically. Mr. Norman refused the extraction of the third molar initially because of his fear of oral surgery so you initiated the amalgam and composite replacement and have completed three of the mandibular fixed units. During the last two weeks, however, he developed a pericoronitis and agreed to the surgery. Prior to the extraction, you reviewed and he signed your standard oral surgery consent form that indicated the type of surgery and the benefits as well as the risks of treatment including the risk of dislodging the adjacent gold crown. During the procedure, a surgical sectioning of the tooth was necessary and during the elevation the second molar crown and core dislodged revealing gross intracoronal caries that penetrated the furcation. You informed Mr. Norman of this discovery and the need to extract the non-restorable molar, and although he was upset that the tooth had to be extracted, he appeared to understand the circumstances. After the surgery, you even showed Mr. Norman the decay in the second molar.

He had no complications during the following two weeks after the surgery. This afternoon he calls you and during your conversation reveals that he has decided to sue you to cover the cost of prosthetic replacement of the second molar with an implant or removable partial denture. He informs you it's "nothing personal," that he really "appreciates" your treatment thus far, and that he even wants to proceed with the final two crowns scheduled in three weeks. You inform Mr. Norman that in ten years of practice you have never been sued but he responds, "I just don't want to pay for the treatment to replace the molar. I'll drop the suit if you do it at no cost to me."

You are now faced with an ethical dilemma. Check the course(s) of action that you would follow and mail or fax this page, or a note indicating your recommendation, as instructed below:

1. _____ continue to treat Mr. Norman for his two remaining fixed prosthodontic units,
2. _____ attempt to persuade Mr. Norman to drop the case as he won't win,
3. _____ perform the prosthetic replacement of the second molar at no fee,
4. _____ review the case with your lawyer and refrain from further treatment of Mr. Norman, or
5. _____ other alternative (please explain) _____

SEND YOUR RESPONSE BY **MARCH 7, 1995** ATTENTION:

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as 10% phosphoric rather than the 37 to 40% used for enamel etching (7). The acid should be applied for 15 seconds and placed passively without rubbing or scrubbing of the surface (5). A dentin bonding system should be used in this case, as the bond strength of surrounding enamel is stronger than the bond to dentin and the etched enamel may pull the composite away from the dentinal wall, causing a gap at the cavity wall (5). Research has demonstrated that dentin without a dentin bonding agent has increased bacterial invasion (8), disappearance of the odontoblastic layer, increased inflammatory cell infiltration, and increased irritation dentin formation. Using a dentin bonding system requires conditioning the dentin (etching), priming (impregnating the surface to form a hybrid layer), and bonding (3). Although some dentin moisture is needed for a strong bond, excessive moisture or desiccation may effect bond strength (3). There is also evidence that there is a significant variability in the bond potential and stability of various dentin bonding systems that may affect marginal leakage and gap formation (8). The research on dentin bonding typically involves primary dentin, rather than abrasion lesions, that may be more sclerotic and less successful to dentinal bonding (4). Overall, dentin bonding systems require meticulous technique with no surface contamination (9). The composite material itself may affect gap formation if there is excessive shrinkage that may debond the restoration. Fillers in the composite have a variety of particle sizes, different ratios of particle sizes, and variability of filler rates between 35 to 71 percent by volume (3). The management of the light source may accentuate composite shrinkage if the material is placed too thick, over 0.5-

mm, if the light intensity of the curing unit isn't greater than 300 milliwatts/cm², if the light is held too far away from the surface, or if there is excessive internal scattering of the light within the composite (3).

Overall, there are numerous factors that may have contributed to Carole's acute response, including the preoperative pulpal status, RDT, preparation design, acid etch concentration and exposure time, dentinal bonding system efficacy, composite materials properties, and overall quality of isolating, preparing and restoring her tooth. Should patients be informed about all the risks of dental treatment? Where should we "draw the line" when seeking their consent?

Informed Consent

One of the major challenges to practicing dentists is understanding and seeking patients' informed consent. Informed consent in dentistry is complicated by the intertwining elements of law and ethics, and the technical nature of dental treatment.

Canterbury v. Spence (1972) (10) was a landmark informed consent decision in which Judge Robinson stated: "The root premise is the concept, fundamental in American jurisprudence, that 'every human being of adult years and sound mind has a right to determine what shall be done with his own body,' and 'true consent to what happens to one's self is the informed exercise of a choice, and that entails an opportunity to evaluate knowledgeably the options available and the risks attendant upon each (11)." The Canterbury Case, along with earlier cases, was a turning point in medicine because it recognized the patients' right to self-determination. Philosophers like Bruce Weinstein base the ethical

principle for informed consent on the respect for patient autonomy (the patient's personal liberty) (12). The courts have said that patients have a right to information and our ethics codes have stated: "The dentist should inform the patient of the proposed treatment, and any reasonable alternatives, in a manner that allows the patient to become involved in treatment decisions" (ADA Code) (13) and, "Dentists should merit the confidence of their patients by rendering appropriate service and attention, competently and timely, based upon the patient's right of informed self-determination" (TDA Code) (14).

While a full discussion of consent is not possible in this brief overview, there are two points relevant to Carole's case. First, most dentists probably perceive informed consent as a legal rather than ethical concept (15). This is not surprising, as doctors must deal with how they will manage the practical problems of consent, including: 1) how much information should be included?; 2) does my patient understand the information?; 3) is my patient capable of understanding the information?; 4) are there others who need to be involved in the decision?; and 5) should consent be in writing? Doctors sometimes view consent as primarily a one-way communication, where treatments, risks and benefits are listed, and patients sign a form acknowledging their understanding. Philosopher David Ozar challenges this view when he says, "The ideal relationship requires choosing on both sides and mutual respect for autonomy on both sides as well (16)." The second point that affects this ethical and legal discussion is the technical nature of dental practice. There are no guarantees in health care precisely because our knowledge and

skills are imperfect and our patients are unique. Although we may review the research and use the most contemporary materials and technique, we understand that our success or failure regarding the benefits and risks of treatment are patient-dependent, and we must acknowledge that we have no perfect materials and techniques. Even seasoned clinicians face situations where the patient's response to treatment is the exception, rather than the expected norm. One respondent wrote in this regard, "the probability of this event is outside the range of routine informing, which would tend to alarm patients more than help them." An endodontist wrote: "A certain percentage of Class V restorations, no matter how carefully done, will result in the pulp developing an irreversible pulpitis. That is dentistry. They cannot be predicted." Other dentists wrote that desensitizing should have been attempted first before restoring Carole's tooth, while another added that after the painful episode the dentist should first attempt palliative treatment with ZOE to "let the tooth calm down." Another respondent concluded: "This dilemma seems to be more about pride than ethics. If you don't bend a little now, you are going to have to do some major sucking up later — get it over with and possibly make a friend."

Conclusion

Doctors are legally and ethically obligated to discuss proposed treatment, reasonable alternatives and risks and benefits of treatment. While it may be prudent to inform patients that any restorative technique may cause an irreversible pulpitis, dentists should understand the risks of dental materials and techniques and convey relevant information. In Carole's case, this means the possibility of

postoperative hypersensitivity and even irreversible pulpitis, depending on the preoperative tests. If Carole's dentist was practicing competently using the dental composite technique, and if the lesion offered no observable complications (i.e., pulp tests and RDT), the dentist is not ethically obligated to perform, or refer, root canal treatment at no fee.

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EDITOR'S COMMENT: *Responses to the ethical dilemmas are views of the contributors and consultants and not Baylor College of Dentistry, the National Center for Policy Analysis or the Texas Dental Association. Address your comments to Dr. Thomas K. Hasegawa, Jr., Department of General Dentistry, Baylor College of Dentistry, P.O. Box 660677, Dallas, TX 75266-0677, or fax to (214) 828-8952. Dr. Duke is an Associate Professor and Director of the Clinical Research Facility, the University of Texas Health Science Center — San Antonio College of Dentistry.* ■