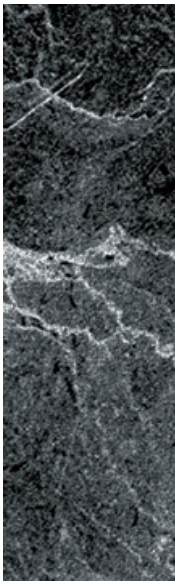

Perspectives

THE "DAUGHTER TEST" IN ELECTIVE ESTHETIC DENTISTRY

We read with interest the excellent overview of the 25-year status of porcelain laminate veneers by Dr. Mark Friedman[1] and agree with his statement "It is unfortunate that some members of our profession misrepresent porcelain veneer restorations as if they were completely innocuous to the dentition." It is not our intention to initiate a witch hunt on the porcelain veneer technique but to express considerable disquiet regarding the seemingly mindless disregard for sound tooth substance involved in destructive "veneer cases" that are published regularly and increasingly, even in respected, peer-reviewed publications such as this.

Anecdotally, we are aware that UK dentists see much more severe levels of tooth wear in our patient base than our US colleagues. Most of the cases presenting to us for treatment suffer from much greater levels of tooth substance loss than those displayed in publications emanating from the Untied States. The majority of our cases are treated by using composite bonded in place at an increased Occlusal Vertical Dimension (OVD). It is well known that dentate patients adapt well to modest changes in vertical dimension without problems, a concept originally demonstrated by Anderson[2] and later by Dahl.[3] It is our view that, in many cases, long-term composite build-ups should be the preferred line of treatment and that these have shown demonstrable success with an excellent "fallback position".[4] These provide esthetic restorations—as demonstrated by the mock-up for a 43-year-old patient in the recent article by Chen and Raigrodski[5]—with an esthetic and functional benefit capable of being delivered without any loss of the remaining residual sound precious tooth substance. Instead, we read of patients being placed, with almost reckless abandon, on the spiral of further destructive restorative dentistry, from which they cannot escape. The long-term sequelae of this spiral may well include further loss of the structural strength of the teeth and, in many cases, pulpal death.

We disagree strongly with the glib statements contained in the Chen and Raigrodski article, such as the statement that porcelain laminate veneers are "one of the most conservative treatment modalities available."[5] Many preparations that we see, originating from the United States, involve dentine, with the potentially deleterious effects on longevity of the restoration.[6] In this respect, the results from Dumfahrt and Schaffer indicated that the failure rate increased ($p < 0.01$) when the finish line crossed an existing filling, with a tendency for failure to increase ($p = 0.058$) when parts of the preparation surface were in dentine.[6]

Bleaching to improve the color, coupled later with bonding with direct composite, is biologically smart and will provide more-than-acceptable results in the majority of cases. In this respect, it has been shown by Poyser and colleagues that it is possible to restore many significantly worn teeth using adhesively retained composite restorations.[4] These workers found that "direct composite restorations have distinct biologic advantages compared with crowns, and for the majority of patients they perform

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well, offer a high degree of patient satisfaction and require only an acceptable level of maintenance. Patient accommodation to the technique was good. No detrimental effect on TMJ, periodontal or pulpal health was noted in any patient. Bulk fracture and failure were uncommon." Other research has indicated similar results.[7–9]

The fallback position is something that always should be considered, given that no restoration lasts forever. Common sense and experience prove that this fallback position is much better with restorations that do not involve cutting away of residual sound tooth substance, especially when this is already reduced because of wear.

We have noted another case in which a 57-year-old male requested "longer teeth and a better-looking smile."[10] He received full-mouth crown preparations and, ultimately, a "beautiful result" using state-of-the art materials in order to lengthen his upper front teeth by a couple of millimeters. We question whether the preparation of all of the teeth (in one course of treatment) in the maxillary arch could ever have been really necessary, and we are extremely concerned that the mandibular arch was treated in similar fashion. We have seen and have been concerned about this outmoded and cavalier approach to sound tooth tissue demonstrated in publications in the United States and increasingly in the UK. By the rules of chance, it would seem highly unlikely to us for the patient to require the preparation of all of his or her teeth, unless they represent rank and extraordinary bad luck. Surely, if patients are presented with relevant information on the very real potential for pulp death following crown preparation, which must be a consideration with even moderate, let alone more destructive preparations,[11,12] it would be astonishing if any sane patient decided to proceed with such aggressive treatment for that level of problem. The biologic cost of aggressive treatment, in terms of both hard- and soft-tissue destruction, should always be and has to be an emphasized part of the informed consent process. It is very sad and professionally a long-term concern that the concept of minimally invasive dentistry for mild cases, which initially was developed in the UK and AustralAsia and which has become well established in the UK and Europe, does not appear to have reached the west coast of the United States. This is especially so if the cases that we have read are typical examples.

We would not question the undoubted technical and laboratory skills demonstrated in the aforementioned publication. The wrong treatment carried out beautifully is still, sadly, the wrong treatment. The structural damage performed to these teeth and the associated biologic costs for a questionable esthetic gain is very worrying. We are health-care professionals concerned with long-term health gain and are not short-term opportunistic and temporary beauticians who prey on the vanities and insecurities of vulnerable patients. We would doubt that many patients are given an objective, clear picture of the destruction of their teeth involved in these traditional but outmoded procedures.

The dental profession needs a wake-up call and needs to be focused on the real and present dangers of these destructive approaches to teeth. Dr. Friedman's excellent and balanced article forms part of that much-needed correction in the profession's thinking. Richard Simonsen, one of those who introduced the porcelain veneer technique to the profession, recently stated, "Where is the professional and public outrage at the troubling trends in the marketing and selling of 'cosmetic' dentistry that besiege our profession today?[13] The code of *primum non nocere* (firstly, do no harm) seems to have been cast aside in the headlong pursuit of outrageous overtreatment for

financial gain by some." The members of the American Academy of Esthetic Dentistry have also responded in a questionnaire,[14] as follows, demonstrating that it is becoming aware of the problems of excessive preparation and poor treatment. Among the results were the following:

1. The biggest threat to the dental profession today is botched dentistry (24% of respondents).
2. The biggest threat to esthetic dentistry today is overtreatment (33%).

In this respect, there are well-known risk factors for veneers and esthetic treatments:

1. These are complex treatments that carry increased risk.
2. Veneers are placed in patients who can afford them (and know how to spell lawyer!).
3. The patient could be suffering from a body dysmorphic disorder.

Our long-term concern for the patients' well-being and for the profession at large is borne out by a large increase in settlements for cases involving esthetic treatment when this has not led to patient satisfaction (Kevin Lewis, Dental Director, Dental Protection Ltd., London, personal communication, 2009). Surely, the sensible solution is to take considerable time to get to know and to understand the patients (Why do they want the treatment and why do they want it now?), to understand their problems, and to have a full understanding of the range of techniques that might be employed predictably, including an objective approach to the benefits and risks of each.

It may be timely now to introduce an unscientific but potentially very relevant test, which might be of help in elective esthetic treatment planning, especially if this planning involves the elective loss of tooth tissue. This is the "Daughter Test." This asks the question "Knowing what I know about what is involved with this proposed dentistry, would I carry out this treatment on my own daughter's teeth?" Variations on this test include "Would I have this treatment carried out on my own teeth, my children's teeth, or my partner's teeth?" A negative response should prompt a radical rethink and probably initiate a change of plan involving a more sensible and less destructive approach with which the operator and his/her patient and family are more comfortable because it addresses the health of the teeth and the patient in the much longer term.

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