Accreditation Clinical Case Report, Case Type I: Six or More Indirect Restorations (Failed)



by John Highsmith, D.D.S., D.I.C.O.I.

Dr. Highsmith received his dental degree from the University of North Carolina School of Dentistry in 1984, after which he completed a general practice residency at the Veterans Administration Medical Center, Baltimore, Maryland. He has been in private practice in Clyde, North Carolina, since 1985. An AACD member since 2000, he also is a member of the American Dental Association and the North Carolina Dental Association, a Fellow of the Misch Implant Institute, and a Diplomate of the International Congress of Oral Implantologists. He takes 100-200 hours of continuing education annually, and counts among his mentors Omer Reed, Peter Dawson, Bill Strupp, John Kois, Frank Spear, Bill Dickerson, Clayton Chan, Darryl Nabors, Paul Sletten, Mark Hyman, and Carl Misch. Dr. Highsmith's wife, Sandra Hayes, was his patient in the Accreditation case discussed here.

Introduction

The elective enhancement of a smile has many requirements for a successful outcome, including a receptive, trusting patient with realistic expectations; proper planning and visualization on the part of the dentist, a well-thought-out treatment plan; skillful execution of the treatment; and a talented, artistic ceramist. All options should be considered, and the most conservative plan that achieves the desired outcome should be selected. In this case, options included composite bonding, full crowns, or porcelain veneers. Partial-coverage porcelain restorations are often chosen because they are very conservative (albeit irreversible), especially in cases where the substrate is light enough to allow conservative preparations. Their longevity rivals porcelain-to-metal crowns, with the advantage of increased esthetics and conservatism.¹

In this case, options included composite bonding, full crowns, or porcelain veneers.

HISTORY

A 31-year-old male wished to improve his smile. He presented with several diastemas, a peg lateral, and an unusual mottling of the enamel surface, possibly from fluorosis (Figs 1 & 2).

CLINICAL EXAMINATION AND DIAGNOSIS

The patient's periodontal health was excellent, and there was no evidence of carious activity. He had no musculoskeletal complaints, but did have moderate wear on the incisal edges of his anterior teeth. These teeth were mottled in color, with very little translucency. The patient was diagnosed with multiple diastemas, unesthetic fluorosis, and moderate bruxism.





Figure 1: Full face, before and after.

TREATMENT PLAN

Feldspathic porcelain laminate veneers were recommended for teeth ##4-13 to address the patient's esthetic objectives. A processed nightguard was prescribed to prevent damage to the porcelain from a bruxing habit.

ARMAMENTARIUM

- Nikon 35-mm camera (Lester Dine; Palm Beach Gardens, FL)
- 4.8x magnification loupes (Orascoptic Research; Madison WI)
- Zeon light system (Orascoptic)
- diode laser (American Dental Technologies; Corpus Christi, TX)
- veneer depth guide burs (Brasseler; Savannah, GA)
- 7901 12 fluted finishing bur (SS White; Lakewood, NJ)
- plasma arc curing (PAC) light (American Dental Technologies)

- Creation feldspathic porcelain (Jensen Industries; North Haven, CT)
- Hydro-Cast Unidose silane (KaySee Mfg./Sultan Dental; Englewood, NJ)
- Prime and Bond NT bonding agent (Dentsply L.D Caulk Division; Milford DE)
- porcelain veneer luting resin (Bisco; Schaumburg, IL)
- All-Bond 2 bonding agent (Bisco)
- Core paste enamel shade (Den Mat; Santa Maria, CA)
- Dimension polyvinyl silane (PVS) (3M ESPE; Minneapolis, MN)
- Gluma desensitizer (Heraeus Kulzer; Hanau, Germany)
- Luxatemp temporary acrylic (DMG Hamburg; Hamburg, Germany)
- Sil-Tech putty (Ivoclar Vivadent; Amherst, NY)

- Garant dimension impression material (3M ESPE)
- 430K lubrication-free, highspeed handpiece (Star Dental; Lancaster, PA)
- slow-speed handpiece (Kavo; Biberach, Germany)
- finishing strips (Cosmedent; Chicago, IL)
- Dialite intraoral porcelain polishing kit (Brasseler)
- Ektachrome EPN slide film (Eastman Kodak; Rochester, NY)
- Closys cleansing system (Rowpar Pharmaceuticals; Chicago, IL)

TREATMENT

PREPARATION

The patient was anesthetized with topical anesthetic, 4% plain citanest and 3% articaine with epinephrine 1:100,000. Teeth ##6-11 were prepared for reverse three-quarter crowns, because of the previous dia-





Figure 2: Unretracted smile, before and after.

stemas. Teeth #4, #5, #12, and #13 were prepared for labial veneers, leaving the palatal cusp intact. Care was taken to leave as much enamel as possible consistent with the esthetics of the final result. The diode laser with a 400-micron initiated tip was used for tissue contouring necessary to create gingival symmetry. As final tooth shapes were not being dramatically altered, 0.7mm depth guide burs were used to ensure proper and even reduction and ultimately a uniform thickness of porcelain. The laser was used to expose any subgingival margins. A final impression was taken with PVS material. Desensitizer was placed onto the preparations before temporizing. Provisional restorations were fabricated with shade A-1 temporary acrylic, using a putty matrix that had been formed over the diagnostic wax-up, using the shrink-wrap technique. Care was taken to open up the gingival embrasures with a dull 7901 flame carbide bur to allow adequate room for cleaning and optimal tissue health. The patient was given home care instructions and chlorine dioxide rinse to ensure excellent tissue health at cementation.

Feldspathic porcelain was chosen for the restorations because of the ability to build color into the whole restoration with a conservative reduction

Because the patient lived a four-hour drive away, he approved the appearance of the provisional restorations before he left the office. Impressions and photographs of the approved provisionals were taken to communicate contour and incisal edge position to the laboratory.

Feldspathic porcelain was chosen for the restorations because of the ability to build color into the whole restoration with a conservative reduction. Pressable porcelain would have been chosen if the patient had wanted a very white result (whiter than B-1, easily achievable with an

0-1 ingot), or required more than a 3-mm thickness of porcelain.² Only one coat of die spacer was used in the laboratory, to ensure that the porcelain-to-composite ratio was greater than 3:1, in order to avoid cracks due to the different coefficients of thermal expansion of porcelain and composite resin.³ Thick composite under a feldspathic veneer makes it more likely to crack. The patient chosen shade B-1. The cuspids were made a half-shade darker at their gingival aspect for a more natural appearance (Figs 3 & 4).

CEMENTATION

At cementation, the tissue health was excellent due to proper finishing of the provisionals and the patient's meticulous home care. Anesthetic was given, and the temporaries were sectioned and removed. The try-in media of first choice was water, rather than having to rely on color from the luting cement. The veneers were tried in individually first to check for marginal integrity. They were then tried in together to evaluate inter-





Figure 3: Unretracted lateral smile, before and after.





Figure 4: Retracted 1:2 frontal, before and after.

proximal contacts, and for the patient to approve the esthetic result. The mould chosen was rather square, to match the facial characteristics of this stocky, strong young man. Both the patient and I approved of the appearance of the case. The veneers were prepared for bonding by cleaning and acidifying the surface with 37% phosphoric acid, rinsing well, and applying silane, which is supplied in individual ampules for single use only to ensure freshness and a good silanation. The silane was air-dried completely and bonding agent was applied to the internal surface of each veneer.4

Rotary instruments were avoided where cementum or dentin could be damaged, possibly resulting in postoperative sensitivity.

FINAL RESTORATIONS

A split rubber dam technique was employed to facilitate isolation during the technique-sensitive process of bonding the final restorations. The teeth were cleaned with pumice and rubber cup and then air-abraded with 50-micron aluminum oxide powder in a micro etcher to ensure a totally clean surface. The surface was also cleaned with bleach in an inspiral syringe to remove any smear

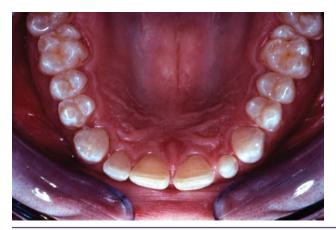




Figure 5: Occlusals, before and after.





Figure 6: 1:1 frontal before and after.

layer and disinfect the surface.⁵ The teeth were etched three at a time with 37% phosphoric acid and rinsed well. Desensitizer was applied with a cotton pellet to achieve the properly moist surface. Bonding agent was applied for at least 20 seconds to each tooth, air-thinned with a clean and dry air syringe, and light-cured with a PAC light. Each porcelain restoration was placed, the excess removed with brushes and rubber tips, and tack-cured at the facial gin-

gival margin. The interproximal excess was removed with floss, and the cement then completely cured for at least 20 seconds per surface, moving the light every 10 seconds to avoid excessive heat build-up. Excess resin was removed with sharp scalers. Rotary instruments were avoided where cementum or dentin could be damaged, possibly resulting in postoperative sensitivity.

The occlusion was adjusted and those surfaces polished using an

intraoral polishing kit. Any interproximal roughness was smoothed with finishing and polishing strips. Anterior guidance was carefully adjusted to smooth group function in protrusive and shallow cuspid rise (Figs 5 & 6).

CONCLUSION

Cases like this are extremely satisfying for clinician and patient alike. Proper planning, careful execution,

excellent laboratory support, and a motivated patient can combine for an excellent esthetic result. The patient and his family were extremely happy with the improvement in his smile and self-confidence.

Acknowledgment

The author thanks Kent Decker, C.D.T., for the masterful ceramics in this case.

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Examiner's Perspective for John Highsmith, D.D.S., D.I.C.O.I.



Nils Olson, D.D.S., F.A.A.C.D., F.A.G.D.

Dr. Olson is a 1977 graduate of the University of Maryland, Baltimore, College of Dental Surgery. An Accredited member of the AACD since 1998, he recently attained Fellowship in the Academy. Dr. Olson also has achieved Fellowship in the Academy of General Dentistry and the American College of Dentists. He is a member of the AACD's Accreditation Committee and also serves as an Accreditation examiner.

Dr. Olson lives and practices cosmetic and restorative dentistry in Frederick, Maryland. He periodically lectures on cosmetic dentistry and has been an instructor for several esthetic clinical programs. The father of two daughters, he is an avid skier and golfer. Dr. John Highsmith was kind enough to submit both a previously failed case; as well as his subsequent case, which passed, for Accreditation Case Type I, Six or More Indirect Restorations. The failure of this case hinged principally on a few issues, most notably case selection. Several of the presenting factors of this case made it very challenging to adequately address the preoperative esthetic issues through restorative dentistry alone. The midline was canted both pre- and postoperatively. There was also a severe and distracting dental midline discrepancy from the facial midline. As with any Accreditation case, there are no points awarded by the examiners for "degree of difficulty." The final results were judged on their own merits, which put the case at a distinct disadvantage.

It was clear, too, that the axial inclinations of teeth #7 and #8 were improper. The roots appeared to be inclined toward the midline (mesially), as opposed to a more correct distal inclination. This contributed to the canting of the midline as well as to the asymmetry of the outline form of the two central incisors, which was particularly visible near the tip of the papilla between teeth #8 and #9.

Poor marginal adaptation of several restorations was noted as well. Visible margins were seen on teeth #7, #9, and #10. Review of the radiographs raised questions of interproximal margin integrity. A small but nevertheless visible black triangle was also present between #6 and #7.

Despite the fact that the patient benefited from a very nice result, the case was simply too problematic for Accreditation purposes. Minor and major faults do add up; the importance of careful case selection can never be overemphasized. *Ap*



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Lessons Learned from John Highsmith, D.D.S., D.I.C.O.I. (Failed Case)

bγ John Highsmith, D.D.S., D.I.C.O.I.

Failing an Accreditation case is never pleasant. The emotions that prevail—frustration, anger, disappointment, embarrassment—must be dealt with, but ultimately are stepping-stones to personal and professional growth. One asks, "Where do I go from here?" The choices are either to quit the process, or to persevere and continue the journey. The first step in choosing to continue is to take a hard, critical look at the case to see why the examiners failed it.

First and foremost, this was a difficult case for Accreditation. It was a terrific case to do, and it provided a wonderful service for this young man (the case was completed in 2001 and is doing very well), but that does not mean it works well for AACD Accreditation. The closing of large diastemas is very difficult to transform into an ideal result. Lip asymmetries tend to frame the case poorly and give a less-than-balanced appearance.

The specific comments from the examiners on this case were as follows:

CRITERIA #18—POOR MARGINAL ADAPTATION

Margins are visible on the 1:1 view, and there appears to be a short margin on one of the radiographs. (Yes, the examiners do look at the films!)

CRITERIA #21—CANTED MIDLINE

While the midline appears straight on the retracted views, looking back on the case, the unretracted views do give the appearance of a cant. This illustrates the importance of choosing a case that has the possibility of an ideal result. The more challenges not under your control, the smaller your margin for error in the case.

Criteria #22—improper inclination of teeth #7 and #8

The teeth appear to tilt slightly distally. The narrow root of #7 limits the final gingival contour, and as that is something that cannot be changed, it goes back to the issue of case selection. In retrospect, more attention to the contouring of the porcelain in this area could have helped mask the discrepancy.

CRITERIA #3—POOR CASE SELECTION

Overall, that was a huge issue in this case. At first glance, it did not appear to be that great a factor, but that is what learning to "sharpen your eyes" is all about. The large diastemas, discrepancy in root size, and lip asymmetry make the margin for error very narrow. Combine that with a few operator glitches—visible margins, short margin on the film, and less-than-ideal axial inclinations, and the case fails.

So what changed between this case and the case that ultimately passed three years later? The answer is a combination of greater attention to detail and proper case selection. The passed case, while initially looking like a horrible case selection, was actually relatively easy because the intra-arch tooth positions and tissue contours were in the right place. The importance of tooth position and tissue contours in case selection cannot be overestimated-it truly can make the difference between success and failure in the AACD Accreditation process. Of course, small details make a difference, as well; several minor faults can easily add up to enough points off to fail the case.

There are several lessons to be learned from this case. First, case selection is critical. This is addressed repeatedly at Accreditation workshops, and for good reason. Second, pay attention to the small details—they can add up quickly. Third, don't give up! It is rare that a candidate passes all of his or her cases with the first submission. We all have room to grow. \mathcal{A}_D



Accreditation Case Report, Case Type I: Six or More Indirect Restorations

by John Highsmith, D.D.S., D.I.C.O.I.

INTRODUCTION

The cosmetic dentist is faced with a wide array of challenges, ranging from the patient who wishes to change an acceptable smile to an outstanding smile; to the other end of the spectrum, wherein a patient is faced with a severe esthetic deformity such that smiling is simply not an option. The loss of self-esteem due to an inability to smile confidently can rival function and comfort concerns in severity^{1,2} (Figs 1 & 2).

His previous dental visits had honly made him feel worse about his smile.

CLINICAL HISTORY

The patient was a 23-year-old male with a history of poor dental care and frequent consumption of soft drinks. Teeth #2 and #31 were carious below the level of the bone. There was generalized gingival inflammation but no clinical bone loss. There were no signs or symptoms of temporomandibular disease. The patient reported that his mother has not seen him smile since he was 10. He often wore a nose ring to detract from the appearance of his teeth. His previous dental visits had only made him feel worse about his smile, as some dentists and staff members had derided him for having such poor dental health.

DIAGNOSIS AND TREATMENT PLAN

The diagnosis consisted of the following:

- caries, some severe, on teeth ##2-15, ##18-21, and ##28-31
- gingivitis





Figure 1: The self-esteem loss due to an inability to confidently smile can rival function and comfort concerns.





Figure 2: The shape and shade of the final restorations harmonize and blend within the framework of his smile.

- abscessed teeth #2 and 31
- inadequate home care
- poor diet.

The treatment plan comprised home care instruction; dietary education; porcelain restorations at ##5-12; composite resin restorations at #3 and #4, #13 and #14, ##18-21, ##28-30; and extraction of #2 and #31.

ARMAMENTARIUM

- local anesthetic xylocaine 2% with 1:100,000 epinephrine (Cooke-Waite; North Chicago, IL)
- #2 and #4 carbide round burs (SS White; Lakewood, NJ)
- FiberKor post (Jeneric/Pentron; Wallingford, CT)
- All-Bond 2 bonding agent (Bisco; Schaumburg, IL)

- Panavia resin cement (J. Morita; Irvine, CA)
- Build-It core build-up material (Jeneric/Pentron)
- Tubulicid disinfectant (Global Dental, North Bellmore, NY)
- diode laser (American Dental Technologies; Corpus Christi,
- Exaflex impression material (Kerr; Orange, CA)



Figure 3: Digital photograph with a level reference plane allows better visualization of gingival levels.



Figure 4: All caries removed, before core build-ups.

- Futar D bite registration material (Ivoclar Vivadent; Amherst, NY)
- Luxatemp provisional material, shade A1 (Zenith Dental; Englewood, NJ)
- Herculite XRV microhybrid composite (Kerr)
- Renamel microfill composite, shade A1 (Cosmedent; Chicago, IL)
- Silane primer (Kerr)
- OSP pressed ceramic (Jeneric/ Pentron)
- 37% phosphoric acid etchant (Ultradent; South Jordan, UT)
- Gluma desensitizer (Heraeus Kulzer; Hanau, Germany)
- Optibond Solo Plus adhesive (Kerr)
- plasma arc curing (PAC) light (American Dental Technologies)
- RelyX veneer cement (3M ESPE; St. Paul, MN)

- #12 blade (Bard-Parker; Franklin Lakes, NJ)
- Enhance finishing cups (Dentsply Caulk; Milford, DE).
- Dialite porcelain polishing cups and points (Brasseler; Savannah, GA)
- Clearfil SE bond bonding agent (J. Morita)
- operating microscope (Global Surgical; St. Louis, MO)
- 4.8x magnification loupes (Orascoptic Research; Middleton, WI)
- Zeon light system (Orascoptic)

PREPARATION

After plaque control instruction and prophylaxis, the patient was scheduled for tooth preparation. All carious tooth structure was removed with round burs from teeth ##3–15 (Fig 3). Inadequate tooth structure for retention of porcelain was noted on tooth #7. Endodontics

was performed on tooth #7, and a fiber post was placed. Core build-ups on the other teeth (##4-12) were placed using sodium hypochlorite, soap, and disinfectant to cleanse the teeth before etching.3 Teeth ##6-11 were then prepared for full-coverage, all-ceramic restoration; and #4 and #12 were prepared for reverse three-quarter preparations, leaving the palatal cusps intact. Shoulder preparations were used, taking care to round off all area of the preparations, as sharp internal angles concentrate stress in the porcelain and can lead to fractures.4 Preparations were refined using the operating microscope, with gross preparation aided by 4.8x magnification loupes and a light system. Teeth #2, #3, and #14 were restored with shade A-1 microfill composite.

A photograph with a horizontal reference was taken to ensure even tissue heights (Fig 4). Any area of subgingival margin was exposed with a laser, and a full arch impression was





Figure 5: Healthy gingival tissues result from proper adaptation of the porcelain margins and excellent home care by the patient.





Figure 6: The combination of acceptable gingival levels and suitable intra arch tooth position gave the restorative dentist greater control in creating an ideal final result.

taken. Photographs of the prepared teeth were taken with stump shades for the ceramist. A bite record was taken. Temporary restorations were made from a preoperative wax-up and vinyl stent, using shade A-1 provisional material. The shrink-wrap technique was used, taking care to clear out the embrasures for papillae health and space. A facebow was taken, as well as a stick-bite to confirm the level plane for the ceramist. An impression for the opposing model was taken in vinyl material.

Because of the proximity of all the margins to the tissue, sandblasting was not used for fear of initiating bleeding.

Teeth ##18-21 and ##28-30 were restored with microhybrid composite on the occlusal surfaces and microfill composite on the labial surfaces, and bonded with at subsequent appointments. An oral surgeon removed teeth #2 and #31.

One week after the preparation appointment, the patient returned to the office for approval of the shade and general contours. He was thrilled with the change, and was already smiling much more than previously.

CEMENTATION

After obtaining local anesthesia, the temporary restorations were removed by sectioning with a thin diamond and torquing off with a large





Figure 7: Open and symmetrical facial embrasures.

spoon excavator. The pressed ceramic porcelain restorations were tried in dry to evaluate fit and contacts, and then water was flowed around them to evaluate the shade. The patient approved the shape and color of the restorations.

The patient's home care has been meticulous, and the change in his outlook on life has been extremely rewarding for everyone involved.

The porcelain was cut back and layered. It was then prepared for bonding by etching with phosphoric acid to remove any organic debris; rinsed with tap water, then distilled water; dried thoroughly; and coated with silane that includes resin. The restorations were dried with a gentle air stream.

The preparations were cleansed of all temporary material before the try in, and the teeth abraded gently with a diamond to create a new surface for bonding. Because of the proximity of all the margins to the tissue, sandblasting was not used for fear of initiating bleeding. The preparations were cleaned with bleach in an inspiral tip and syringe to disinfect the dentin and remove all smear layers, rinsed, and then etched three at a time with 37% phosphoric acid etchant. They were rinsed, suctioned dry, and wetted with desensitizer on a damp cotton pellet.⁵ Adhesive was generously applied with a brush for at least 30 seconds. The bond was air-thinned and light-cured for 10 seconds with a PAC light. The porcelain restorations were filled with translucent veneer cement and placed, starting at the centrals. All the crowns were placed and, after ensuring full seating with an explorer especially on the palatal, the resin was barely cured for five seconds with a moving curing light. The gross excess was removed by pressure in a gingival direction by a sharp scaler. The facial gingival margins were further tack-cured and the interproximal areas were flossed. Assuming the porcelain fits very well, this technique affords very efficient cleanup of resin cement.3 The resin was thoroughly cured for at least 20 seconds per surface with the PAC light, moving the area being cured every 10 seconds to avoid heat buildup. Excess cement was removed with sharp scalers, a #12 blade, and finishing cups. Occlusion was adjusted for smooth anterior guidance and evaluated for fremitus with the patient sitting up. Any areas of porcelain adjustment were smoothed and polished with porcelain polishing cups and points.

CONCLUSION

Final photographs and radiographs were taken at a subsequent appointment after the tissue healed (Figs 5–7). The patient's home care has been meticulous, and the change

in his outlook on life has been extremely rewarding for everyone involved. He is now pursuing his education and aspires to be a physician's assistant, a career he would not have dreamed of in his previous condition. This young man remains one of our favorite patients.

Acknowledgment

The author thanks Kent Decker, C.D.T., for his fine porcelain work; and for 19 years of collaboration.

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Laboratory Viewpoint for John Highsmith, D.D.S., D.I.C.O.I.



 $^{b\gamma}$ Kent Decker, C.D.T.

Mr. Decker has been a laboratory technician for more than 30 years, starting his own dental lab in 1977 and receiving his C.D.T. in 1985. He is the owner of Clyde Dental Lab, in Clyde, North Carolina. He has taken courses with leading clinicians, including Dr. Peter Dawson; and has attended the Las Vegas Institute and the Institute for Oral Art and Design.

his case began, as all cases do in my laboratory, by pouring three I models. One is a master model; one is a duplicate, which is used to verify the fit of the crowns; and the third is a plaster model to check gingival contour. After the models are mounted with the facebow/stick-bite and bite registration that the doctor sent to the laboratory, the dies are sawed out, trimmed, and painted with die spacer. Then the case is waxed to full contour using the provisional restorations as a guide, making sure that incisal length, labial position and occlusion were duplicated. A putty impression of the wax-up is created, and a duplicate wax-up is made for an alternate or "every other" tooth guide to help with porcelain buildup and contour. Once this procedure is completed, the crowns are then pressed, divested, seated on the master dies, and then double-checked on the duplicate master model. The shade chosen for this case was A-1 and was created using OPC dentin pellets and low-wear porcelain. The pressings were cut back to give room for layering porcelains. The application of the porcelains proceeded using different modifiers and incisal shades to diffuse the light for a more natural result. The "every other" tooth model and plaster model was used for positioning and contouring. Using the information the doctor supplied, the central incisor length, incisal edge position, and occlusion were verified. A strong attempt was made to maintain the character of the natural teeth by using the preoperative models, photographs, and opposing as well as adjacent dentition as a guide. After refining the shape and texture, the crowns were glazed and etched.

It was very rewarding to be able to create beautiful crowns to improve this patient's severely compromised natural teeth, and give him a lasting and confident smile. Striving for excellence is an ongoing personal goal that I have been able to achieve through my work with Dr. Highsmith on this and many other cases. I am very pleased that I was asked to work on this case and then be recognized for the teamwork it took to accomplish the final result.



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Pick up New

Examiner's Perspective for John Highsmith, D.D.S., D.I.C.O.I.

bγ Nils Olson, D.D.S., F.A.A.C.D., F.A.G.D.

Pr. John Highsmith submitted a Case Type I, Six or More Indirect Restorations, with a very dramatic end result. Despite the fact that the pretreatment images revealed a patient in considerable esthetic distress, there were basic factors that inherently favored this case. Dentofacially the case was a good candidate for Accreditation consideration. The soft tissue health and architecture presented few challenges, and there were no problematic functional issues. Intra- as well as inter-arch tooth positions were close to ideal. Lastly, the lower arch displayed few challenges that were outside of the restorative dentist's control.

The postoperative images exhibited a beautiful result. There were, however, relatively minor issues that nevertheless compromised the end result, and should be mentioned. The dental midline appeared to be slightly canted, with a resultant lack of symmetry between the central incisors in width and outline form. Additionally, the axial inclinations of the lateral incisors were not mirror images of one another. These issues did not in any way jeopardize the case in terms of Accreditation.

In summary, this case was successful not only because of such a dramatic esthetic transformation, but also because the esthetic criteria vital to passing an Accreditation case were clearly adhered to. Proper case selection allowed for the final outcome to be solidly in the zone of excellence. The lesson learned from Dr. Highsmith's prior unsuccessful submission was more than amply demonstrated with this case.

