Full Mouth Restoration with Screw-Retained Zirconia Bridges

A man in his mid-50s presented with chief complaints of pain, loose teeth, and difficulty chewing, which greatly inhibited his ability to eat. Clinical examination revealed extensive periodontal disease with tooth mobility. Diagnostic procedures were limited because of a severe gag reflex, so intravenous (IV) sedation was critical to ensure a successful treatment outcome, in addition to limiting the number of patient visits.

Case planning included consultation with our onsite oral maxillofacial surgeon, David Zelig, DDS, and the dental laboratory chosen for this case, Inno DDS. Treatment plans included removal of existing teeth, immediate placement of implants, and temporary full maxillary and mandibular screw-retained acrylic bridges. The key feature of the maxillary screw-retained prosthesis was its fabrication without any palatal coverage, a necessity because of the patient’s gag reflex. A diagnostic 3D cone beam image (i-CAT) provided analysis of bone structure and height to guide placement of implants and abutments.

A coordinated team effort was necessary to accomplish the array of procedures while the patient was sedated for the initial treatment visit. Dr. Zelig completed teeth extraction, insertion of internal hex implants (MIS) with multi-unit abutments, and performed alveoplasty as needed. I continued with the restorative phase to obtain polyvinyl dental impressions and subsequent insertion of immediate temporary screw-retained acrylic bridges. The patient’s teeth were worn down so severely there was no vertical dimension of occlusion, so vertical dimension was established chairside. The lack of posterior alveolar ridge made it necessary to angle the implants and subsequently angle the abutments to correct vertical angulation intraorally (approximately 20- to 30-degree angulation) and establish proper seating of the screw-retained temporary prosthesis. The laboratory technician was on premises to customize fabrication of the temporary acrylic immediate bridges to the length and width of the arch forms.

Four months were allowed for postoperative healing and integration of the implants within alveolar bone. A series of four patient visits (without IV sedation) were completed to finalize the fabrication of permanent zirconia (Zirlux FC2) screw-retained implant bridges; the patient never left a dental appointment without teeth.

The transition to final implant-retained zirconia (Zirlux FC2) prostheses was made without a problem. The patient was elated with the final results, which restored full masticatory function without pain, with the ability to eat, and with a renewed willingness to smile and enjoy life. The patient’s response weeks after final insertion: “It was a game changer for me.”
Figure 1: Pre-treatment: Extensive periodontal disease and teeth mobility; treatment plan included teeth extraction, implant placement, temporary acrylic implant-supported prosthesis, and permanent screw-retained zirconia bridge.

Figure 2: Prosthetic treatment phase for permanent implant-retained prostheses begins after 4 months of implant integration. Multiple-unit maxillary zirconia (Zirlux FC2) fixed bridge framework in the “green” state, milled by the dental laboratory (InnoDDS), prior to sintering.

Figure 3: Occlusal view of the final maxillary zirconia (Zirlux FC2) fixed bridge showing lingual placement of implant screw-retention sites.

Figure 4: Facial-palatal view of maxillary zirconia (Zirlux FC2) fixed bridge showing palatal implant screw placement and beneficial palate-less design for patient with extreme gag reflex.

Figure 5: Final prosthetic treatment phase for mandibular arch. Left side, occlusal view of screw-retention sites for mandibular implant supported (MIS) zirconia (Zirlux FC2) bridge, positioned on stone model.

Figure 6: Right side, occlusal view of screw-retention sites for final mandibular implant-supported (MIS) zirconia (Zirlux FC2) bridge, positioned on stone model.
Figure 7: Final maxillary screw-retained zirconia (Zirlux FC2) bridge, positioned on stone model prior to final insertion.

Figure 8: Post-treatment: Maxillary and mandibular final zirconia (Zirlux FC2) screw-retained prostheses.

GO-TO PRODUCTS USED IN THIS CASE

ICAT
The i-CAT provides an 8.9-second scan that reconstructs in less than 30 seconds, file sizes under 50 MB, an amorphous silicon flat-panel sensor, an extended field of view option and to capture the entire skull, the ability to capture smaller fields of view down to 4 cm in height.

ICAT
IMAGING SCIENCES INTERNATIONAL 800.869.6301 ext. 14024 www.dps.li/a/4EH-24 Reader Service 024

SEVEN
With 8 years of clinical success, MIS Implants’ SEVEN internal hex, screw-type implant system offers a combination of proprietary features that enhance fit, osseointegration, biocompatibility, and durability.

SEVEN
MIS IMPLANTS TECHNOLOGIES, INC 800.869.6301 ext. 14025 www.dps.li/a/4EH-25 Reader Service 025

ZIRLUX FC2
Zirlux FC2 full-contour zirconia offers patients an esthetic all-ceramic alternative to metal restorations that mimic the characterization and translucency of natural teeth. Zirlux zirconia can be prescribed for copings, crowns, bridges, inlays, and onlays.

ZIRLUX FC2
ZAHN DENTAL COMPANY 800.869.6301 ext. 14026 www.dps.li/a/4EH-26 Reader Service 026
Ask us how you can get one of these scanners in your office. FREE!

FIRST CROWN 50% OFF!

Learn more about us at www.innodds.com

1020 Wolcott Avenue, Beacon, NY 12508 • 845-838-9100
IF YOUR PRACTICE ISN’T LISTED ON THE 1ST PAGE OF GOOGLE, IT MIGHT AS WELL BE ON THE MOON.

Unless your prospects are astronauts or aliens, they won’t be able to find you.

Prospective patients search online by topic and city (e.g. Baltimore Dentist). If your website doesn’t show up in the first 10 results of an online search, it’s virtually invisible.

VIVIOSITES Your Pipeline to New Patients.
800-227-2513 | viviosites.com
Rank Higher and Attract New Patients with Your Current Website.

When’s the last time you selected a search result that wasn’t on the first page? You’re not alone. Each month, there are 10 million Google searches for dentists in the United States…94% of those searches end with a website on the first page being selected.

We’ll make sure you’re the one they find.

- Complete competitor and website analysis
- Website content and keyword rewriting
- On-page and off-page optimizations
- Directory submissions, tag updates, and much more!

But don’t take our word for it, check out some real results:

**Dr. B’s Google Search Results**

<table>
<thead>
<tr>
<th>Google Search Terms</th>
<th>Google Page Ranking Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toothache Orange CA</td>
<td>&gt;10</td>
<td>1</td>
</tr>
<tr>
<td>Orange CA Dentist</td>
<td>&gt;10</td>
<td>1</td>
</tr>
<tr>
<td>92866 Dentist</td>
<td>&gt;10</td>
<td>1</td>
</tr>
<tr>
<td>Orange CA Cosmetic Dentist</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Orange CA Straighter Teeth</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Teeth Whitening Orange CA</td>
<td>&gt;10</td>
<td>1</td>
</tr>
</tbody>
</table>

*Dr. B uses our SEO Service

**Dr. F’s Google Search Results**

<table>
<thead>
<tr>
<th>Google Search Terms</th>
<th>Google Page Ranking Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rye Brook NY Dentist</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Rye Brook NY Teeth Whitening</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Rye Brook NY Cosmetic Dentist</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Rye Brook NY Invisalign</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Port Chester NY Dentist</td>
<td>&gt;10</td>
<td>1</td>
</tr>
<tr>
<td>Port Chester NY Cosmetic Dentist</td>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>

*Dr. F uses our SEO and Website Services

FOR MORE REAL RESULTS VISIT GO.VIVIOSITES.COM OR GIVE US A CALL TODAY AT 800-227-2513. ASK FOR A FREE MINI SEO ANALYSIS!