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DENTAL SMART SOLUTIONS

Medical case

Replacement of failed restorations.

Doctor Steven A. Brisman introduces a case where a patient presents with fractured and failed previous restorations that require replacement.

Dr. Steven A. Brisman
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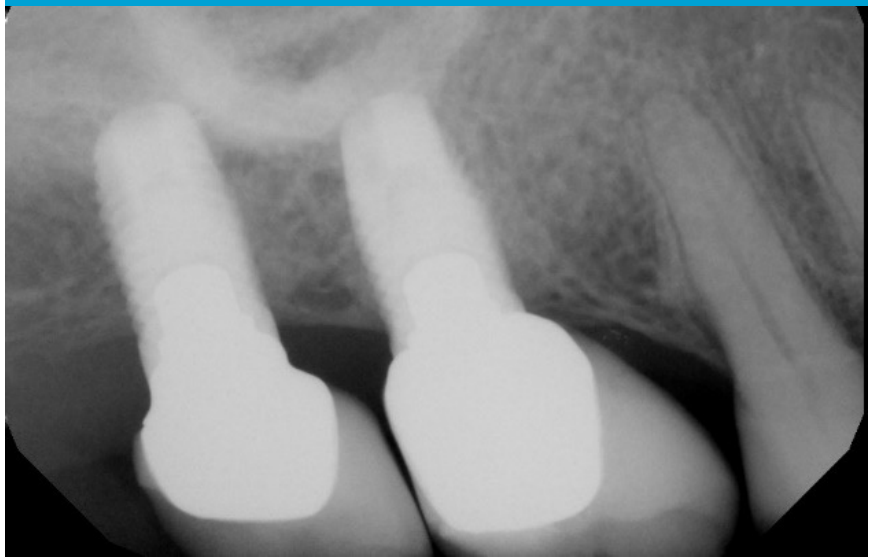
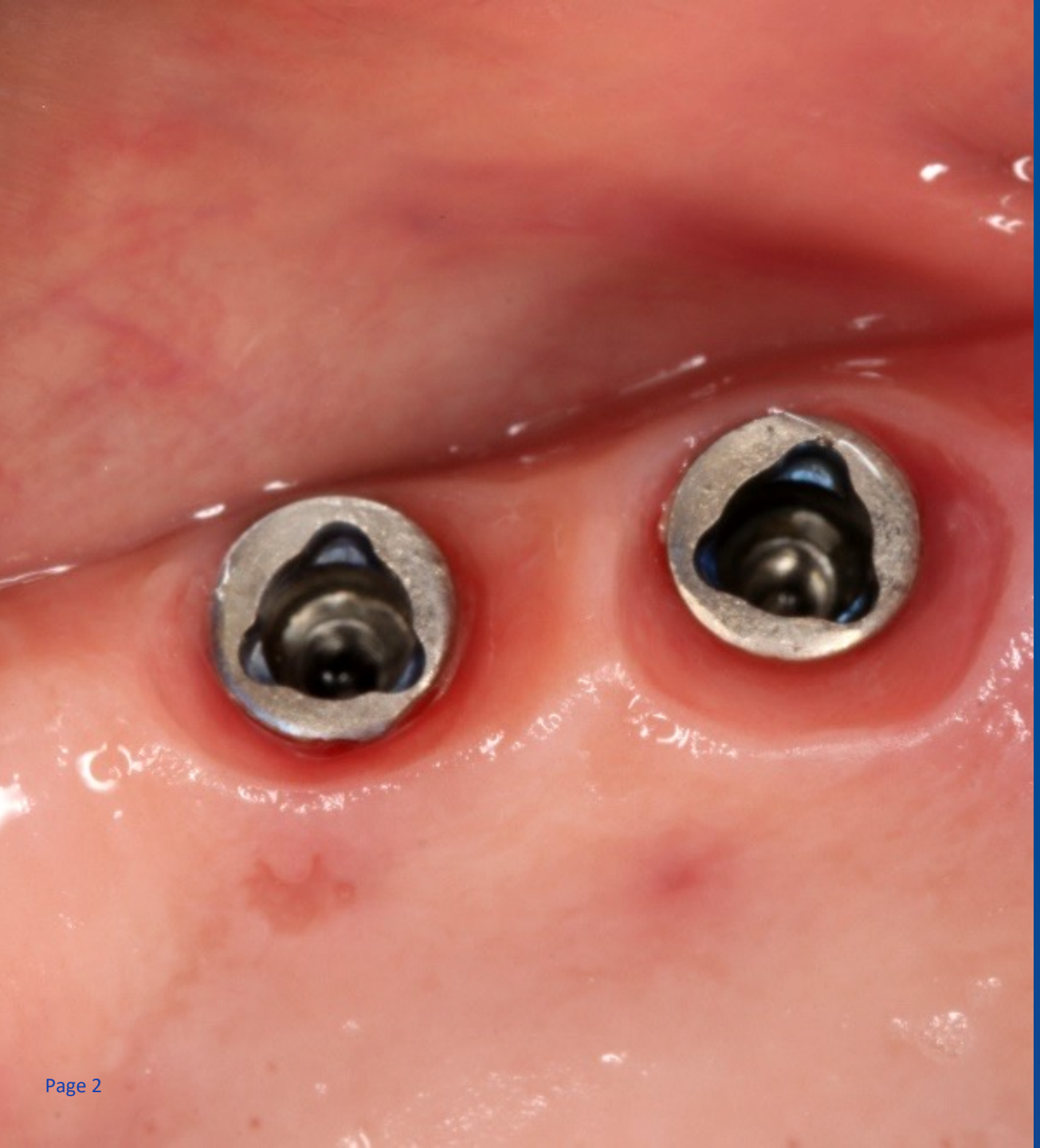
CASE PRESENTATION

A 65-year-old patient presents to the dental clinic with concern of the restorations in the upper right quadrant. The patient's chief complaint is that the restorations are loose, fractured, and exhibited food impaction.

Initial situation





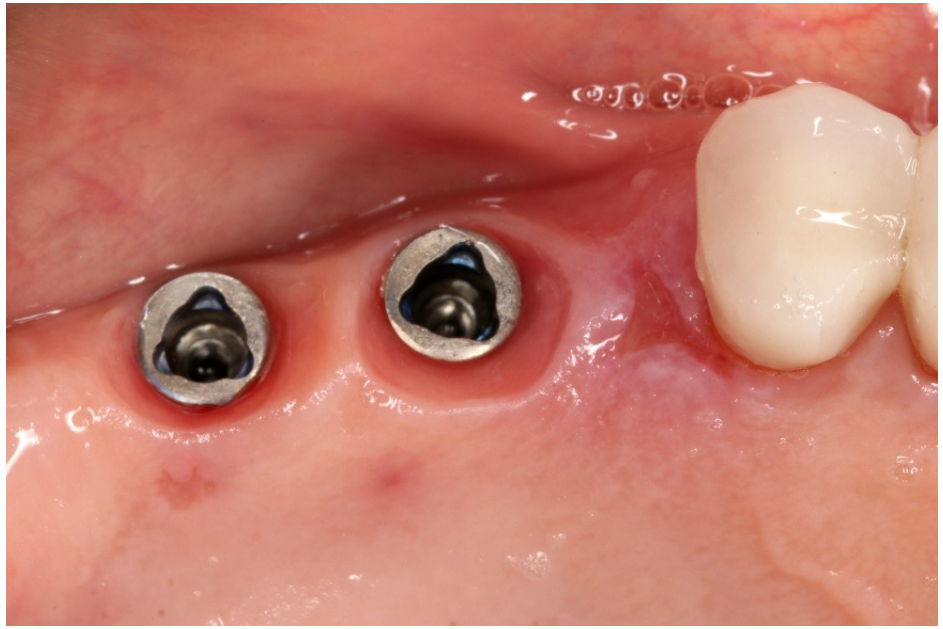
INTRO:

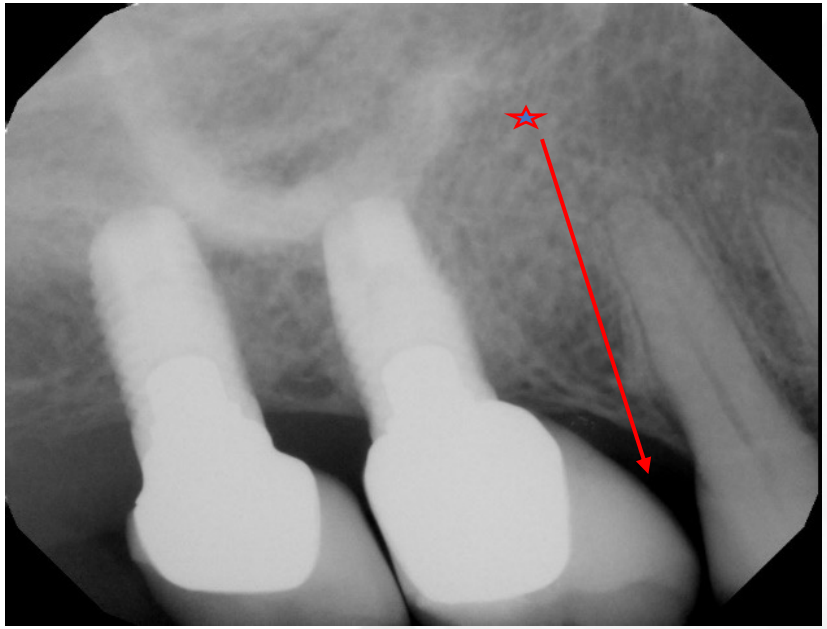
Upon clinical examination, the patient has failing restorations in implant positions teeth #’s 2 and 3. The implants were restored with individual restorations on ceramic metal custom abutments and porcelain veneered coronally. The existing implants were “older” style Nobel Replace Select™ tri-lobed implants, which remain integrated.

But the patient was leaving in 2 days. What do you do? And what are some of the potential reasons these restorations failed?

With the evolution of zirconia, ceramic metal restorations, particularly in the posterior quadrants with limited interocclusal space, have become antiquated. Full contour zirconia provides an exponential increase in biaxial flexural strength (MPa) over veneered felspathic porcelain on ceramic metal substructures.

Moreover, the added dilemma of less-than-ideal angle implants create an added challenge to achieve screw retained restorations. What do we do? Especially with limited time.





DESS® to the rescue!

To begin, the 2 ceramic metal restorations were identified and removed. Due to the implant position and angulation, tooth # 3 created an unsupported cantilever to the anterior.

With a digital laboratory approach, the 3 steps of Data Acquisition, Design Development, and Restoration Manufacturing was followed.

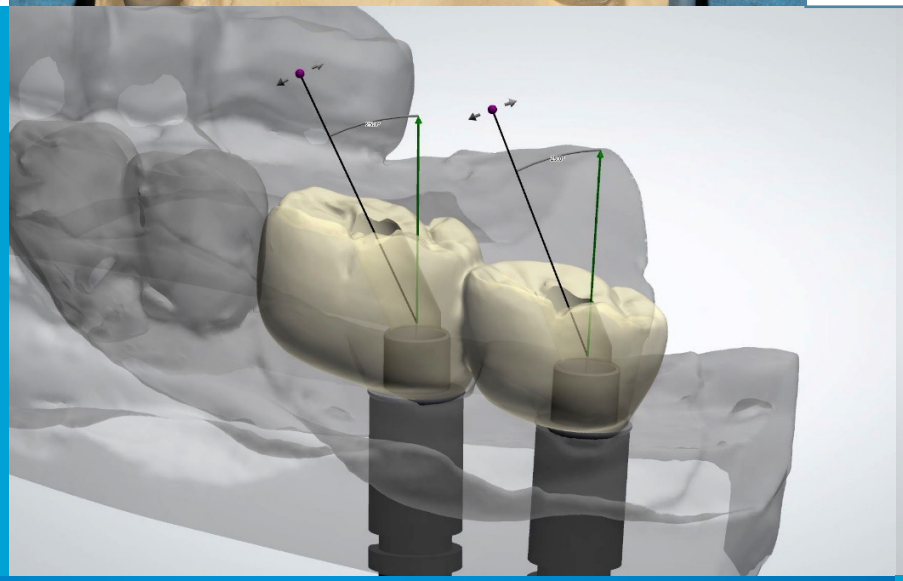
Scanning

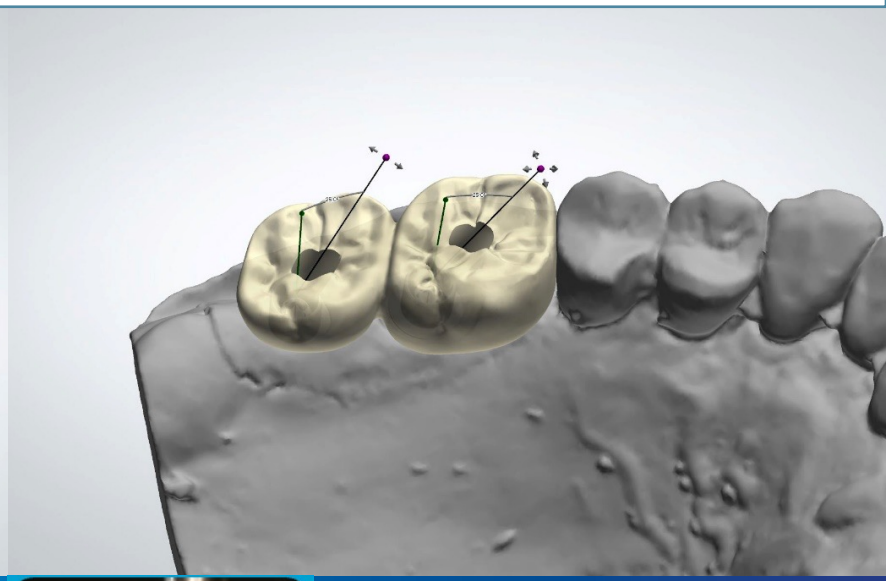
Desktop procedure

DESS® Desktop Scan Abutment

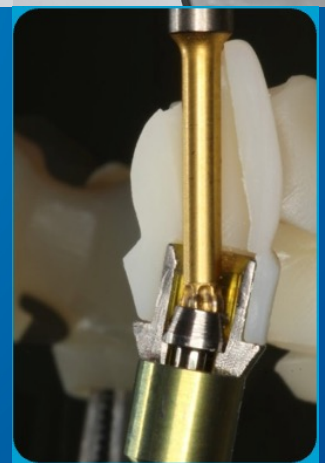
Digital Design

3Shape





Once the existing restorations were removed, implant level impressions were taken, and a cast was fabricated. Extraoral laboratory DESS Scan bodies were used. A 3 Shape design was created utilizing angulated screw channel DESS® ANGLEBase® Ti-Bases and screws. By morphing the angulated screw channel to the anterior up to 25° in 360° angular freedom, this decreased the cantilever distance.



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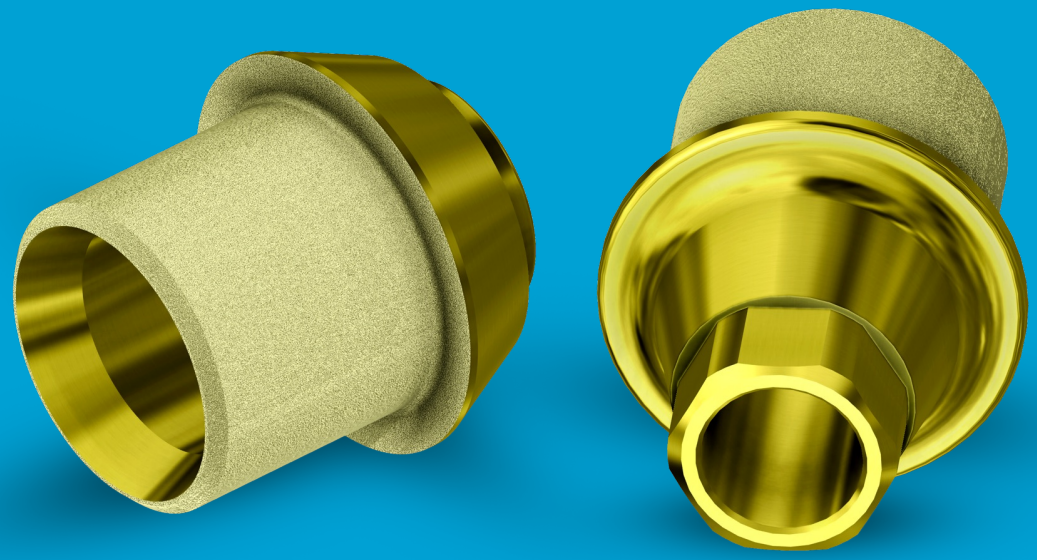
ANGLEBase®



The Ultimate Angled Solution

TECHNICAL INFORMATION

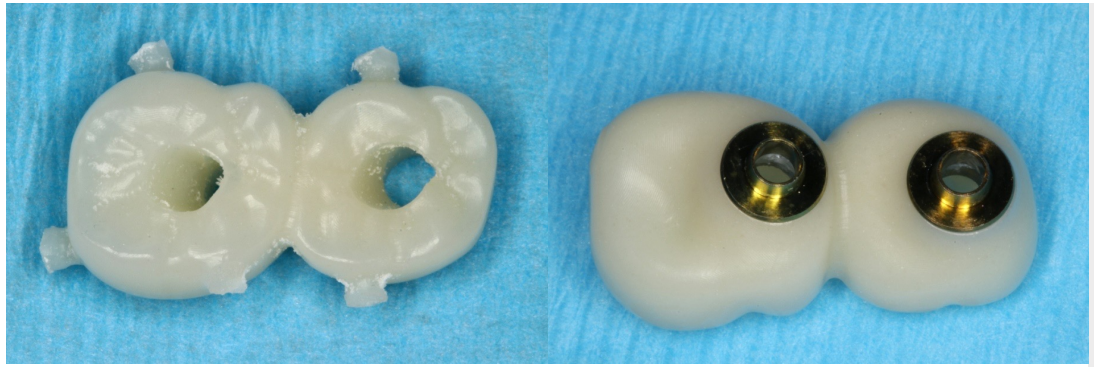
- Titanium Grade V ELI 23
- Select**Grip**® surface treatment
- Gold anodized surface
- Two versions: engaging and non-engaging
- Up to 25° angulation in 360° rotation for optimal results of the ASC (Angulated Screw Channel)
- Typically a cementing surface of 37,83mm²
- Shaft height of 3,0mm
- Combined with our free libraries for Exocad®, 3Shape®, Dental wings® and Blenderfordental®
- CE: Class IIb
- FDA: Class II

FEATURES

- Pure Switch® concept
- Torx® ball based screw socket
- Torx® screw included - same screw design as OEM
- Full recommended torque even at maximum angulation
- Short shaft to increase translucency and aesthetics
- Flat face to avoid rotation on engaging version; maximises Zr thickness

CLINICAL BENEFITS

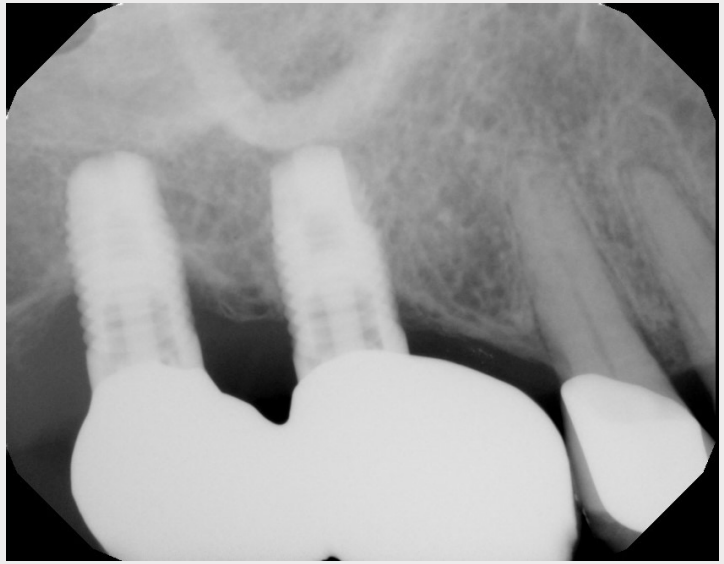
- Angulated screw channel solution
- Short shaft to give 360° angular freedom up to 25°
- Select**Grip**® surface treatment: 5x better cement retention
- Torx® ball screw: optimal torque even at maximum angulation
- Warmer gingival tone in case of gingival retraction
- Parallel walls to increase strength and bond retention



Final restoration placement

Since the patient was leaving within a day, a PMMA restoration was milled and finished promptly.

DESS® ANGLEBase® screw channel abutments were cemented to the PMMA restoration utilising the standard Ti-Base cementation protocol along with S-R connect to prepare the intaglio surface of the PMMA restoration.



Final Result

- ✓ When the patient returned to the dental clinic, a final restoration was then manufactured in full contra zirconia.
- ✓ The same design was used, along with the DESS® ANGLEBase® Ti-Bases and their specific dynamic torx screws.

Conclusion

DESS® ANGLEBase® is the ultimate angled solution, with the most flexible angular channel on the market since 2015.

- ✓ Gold anodised surface for better aesthetic results.
- ✓ SelectGrip® Surface: offers 500% more bonding retention than an untreated Surface
- ✓ Short shaft to give 360° angular freedom.
- ✓ Specially designed emergence hole.
- ✓ Manufactured in Titanium Grade V ELI.

Dr. Steven A. Brisman

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• Doctor of Dental Medicine, University of Pennsylvania School of Dental Medicine.

• Certificate in Prosthodontics, New York University College of Dentistry.

• President of the Greater New York Academy of Prosthodontics in 2019.

• Former Director of Advanced Prosthodontics Touro College of Dental Medicine and assistant professor of Post-Graduate Prostodontics NYU College of Dentistry.

Brisman


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