

Hybrid Denture

Check out this well-documented case replacing a full upper denture with a hybrid prosthesis.

Dentaltown Message Board > Implantology > Implantology > Hybrid Denture | ▶

rjhanks

Member Since: 09/16/09

Post: 1 of 21

I've done a few of these now and thought I'd post the process of the one I'm making now. It'll be a little easier to take pictures now that I'm not scared to death of what the outcome might be. This obviously isn't ideal for everyone, but I've found that they work really well in patients who are new denture wearers or patients who haven't lost much bone and don't need the buccal flange of a removable denture.

We plan on restoring the lower as well but the patient can't do them both at once. I'll post the case as each step comes along. Hopefully I can help some people with this process, as I kind of fumbled my way through my first few. The process that Glidewell has works really well. Total lab cost is \$2,000 and includes everything as long as you're using a compatible implant with its inclusive system.

Fig. 1: Patient has been edentulous for more than 20 years. She hates her denture and only wears it when she is going to be around people. I can't blame her, at rest she shows about 7mm of the anterior teeth due to the contours of the denture. She has taken the denture to her bench grinder on several occasions and removed the entire buccal flange. Even with no buccal flange she is still excessively over-bulked. I'll get a pic of the denture next time the patient comes in. I thought it was pretty incredible how much bone was present considering how long the patient has been edentulous. We fabricated a mock denture/surgical guide/CT scan appliance with barium sulfate that worked really well for placement. I'll post pics of that later too.



Fig. 2: Had a mock-up denture made with the teeth repositioned to ensure that we liked the position. It also doubled as our CT scan appliance with barium sulfate. Once the scan was taken, I also used this as my surgical guide. It wasn't very technical, I used the teeth to orient where I wanted the implants and drilled holes through the appliance. I basically only used this to mark the ridge and I freehanded from there.



Fig. 3: Placed five AB I5 implants. I'm not a huge fan of flapless surgery but the patient's ridge was so large with so much attached gingival, I was pretty comfortable with it. The only

augmentation needed was a sinus bump in the 3/4 area. Glidewell claims they only need four implants in the maxilla but that scares me. All-on-4 could become none-on-3 so easily in the maxilla, so I'd rather over-engineer a bit. We actually only charged the patient for four implants, but that fifth implant is going to help me sleep.



Fig. 4: One week post-op.



Fig. 5: One week post-op impression to begin hybrid denture fabrication. The AB impression transfers are really nice here. No screws to mess with, just snap them in and take them out with the impression.

Figs. 6 & 7: Done for the day. A five-minute impression with the clip impression transfers.



Fig. 6



Fig. 7

I think it's a total of six appointments, this being appointment number one. Next is bite rims and an anterior try-in that screws into two of the implants and has just the centrals set.

Questions and comments please, I still have a lot to learn too, so I'd like to learn a few things by posting this.

Case: Progression Images

Update to the case. I added the pic of the scan appliance in the first section. This appointment is for bite registration and setting of the maxillary centrals. Also adding a few pics of the verification jig from a different case to clear up some confusion. Will post the verification jig for this case when we get to that point.

Fig. 8: Appointment two: Wax bite with the two centrals in place. The tray is screwed into two of the implants, bite is taken, mid-line is marked and centrals are adjusted as needed. Then sent back to lab.



Fig. 8

Fig. 9: Another view showing the non-engaging portion for the implants. Portion that is screwed into the implant is plastic so it has a little give just in case it's a little off still.



For more on hybrid dentures, visit these supplemental message boards:

Thommen System – Hybrid Fix Case
Search: *Fix Case*

Full Arch Immediate Load Denture and Hybrid
Search: *Immediate Load*

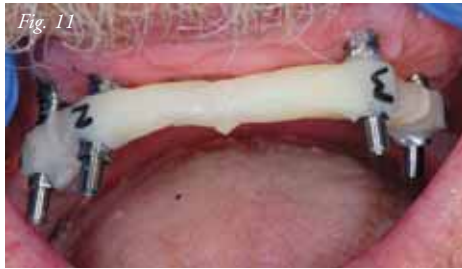


Fig. 10: Verification jig (from another case). Non-engaging open tray impression copings. These are transferred into mouth, luted together and impression is taken.

Fig. 11: Another photo of jig in the mouth and luted together. Impression is taken with custom tray that is provided by the lab. I'll post photos of all of this when I get it for this actual case. This is appointment three and we are still on appointment two.

Fig. 12: Full wax try-in. Usually at this point they gave a verification jig as well. However, I didn't like the look of the centrals they had in the bite verification so I had them change the positioning and the size of the teeth. They were very horsey looking. Also, before I get flamed for having a non-cleansable denture, the flanges will be removed in the final processing.

Fig. 14: This goes to show why I took the impression at a one-week follow up. This is a long process and by the time we're ready to seat the final denture we will be at a point where the implants are well integrated.

More to come as the case progresses. I hope this is helping. ■

APR 7 2012

skiswim4life

Member Since: 03/06/11
Post: 4 of 21

What is the exact final prosthesis, screw retained or locators? ■

APR 14 2012

doctored

Member Since: 09/21/02
Post: 5 of 21

The final prosthesis is a screw-retained hybrid as I understand the OP's description. I have a question. It sounds like the scanned framework is fabricated from the last nade from an impression using a closed-tray technique with transfer copings that are not



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fastened with screws. Do you have the patient in for verification of the framework passive fit with all I/A interfaces fully seated? I have not used a scanned and milled framework yet. When my lab casts a frame, I always do a try-in of the frame and often it has to be cut, indexed and soldered, especially if I use a closed-tray impression technique. The frame fits the cast but sometimes needs correction. If the cast is slightly inaccurate because of the use of "plug in" impression transfer copings, the frame will not fit passively. I have heard some clinicians say this is not really important, but I have also read that it is important especially with a restoration that is "loaded" so soon after the placement of the implants. This "spring" retain impression transfer could possibly be the best of both techniques. I have never seen it and it looks promising. It has the benefits of the open tray impression technique because you do not have to reinsert the transfers and the ease of a closed-tray technique. Thanks for posting. I have to look into this system. Which implant systems are compatible with the spring-retained impression transfers? ■ Ed

APR 15 2012

westonDMD

Member Since: 04/25/08

Post: 6 of 21

Final impression at one-week post op? Why? ■

APR 15 2012

rjhanks

Member Since: 09/16/09

Posts: 7 & 8 of 21

Yes, the final prosthesis will be screw-retained. The impression that I took is just a preliminary to begin setting teeth in wax. I just received the bite rims back that have the two centrals in place that screw into two of the implants only. Once this is done, I will have a verification jig with non-engaging open-tray impression copings. The jig is luted together with your material of choice (I use flowable at the suggestion of the lab), then you take the impression. This

will give us a much more accurate impression than the first one we took. We then do a framework try-in as well just to be totally sure we have passivity. I probably should've waited until I was further along to post but I'll update with photos of each step as we go.

I took the impression at one week because it's not really a final impression and I wanted to get the process going. It will take a couple of months to get through all the appointments for the final prosthesis. I would've taken the impression the day of surgery but she was sedated and I didn't want to risk that. We also had great primary stability of all the implants, so I was comfortable doing it. ■

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doctored These cases are a lot of work, no doubt. I think I will use a scanned and milled framework on the next case that hopefully shows up. I hope you post the photos of the progress. What is the patient using now for a denture? ■ Ed

APR 15 2012



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