

A Tooth for Every Case

Dental technician German Bär describes his experiences with the semi-anatomical Veracia SA tooth line and the wax-free setup support Q³ Pack.

Fabricating a functional and appealing removable prosthesis is a great challenge for both the dentist and the technician. While the cost for a complete denture is modest, it often does not function well or at all because of the limited amount of time available for the fabrication. For most elderly patients, eating food is one of their highest pleasures and, therefore, it is of utmost importance that their dental functionality be optimal. Several studies have confirmed that “chewing problems” are a major cause of bad nutrition in the elderly.

At last year’s International Dental Show 2011 (IDS), Shofu Inc. (www.shofu.com) presented new semi-anatomical teeth called Veracia SA as well as the patented Q³ Pack (Quick Quality Quadrant), which considerably shortens

the amount of time needed for setting up a complete denture with consistent and perfect functionality. Such a development should remove the many hurdles that often stand in the way of both dentists and dental technicians seeking to fabricate a well-functioning prosthetic.

The Veracia SA anterior and posterior teeth were developed based on the fully anatomical Veracia tooth line. This means that—unlike in the past—there is a complete new set of teeth with semi-anatomical elements, but the functional characteristics of the Veracia posterior teeth are preserved and provided for on the exact predetermined places within the abrasion zones.

Instead of simply adding shiny and smooth abrasion facets, the occlusal areas of the teeth have been purposely enlarged around concave free spaces in

the functional direction of the mandible’s movement. This makes possible an extra ideal point of removal, especially at balanced occlusion, since after the setup practically no grinding-in at the semi-anatomical Veracia SA posterior elements in the articulator is necessary. These free spaces also make it easier for the patient to find static occlusion.

Unlike other denture teeth, the Veracia SA teeth can be set up regardless of which system is used. Since there is a clear occlusal setup, there is no need for a high degree of anatomic knowledge to be able to easily and correctly arrange the posterior teeth. This saves time in the laboratory and is very economical, but not at the expense of the quality. Because of their design, these teeth are meant for partial prostheses and unimaxillary prostheses as well as prostheses with remaining natural antagonistic elements, hybrid and implant prosthetics.

Because of the effective reproducibility of central occlusion, the systematically included spaces, and the composite material with low abrasion characteristics, a complete prosthesis can be stabilized for a long period of time with only a small amount of play.

The occlusion offers enough free space when closing the mandible [in close occlusal contact], during adjustments, and when checking movements to stabilize the denture’s immovability in place. This can help delay ridge

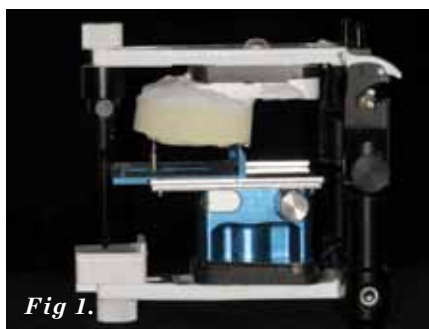


Fig 1. The casts were mounted in the Schöttli HIP-Mount.

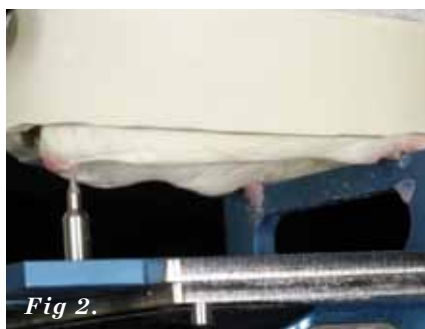


Fig 2. The upper cast was brought parallel to the plane of the table.

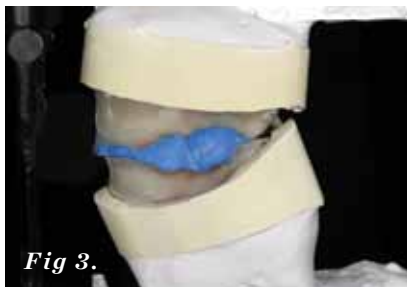


Fig 3.

Fig 3. The mandible was articulated with average movement using the encoded record template.



Fig 4.

Fig 4. The front teeth were set up in the mandible and maxilla with respect to esthetic principles.



Fig 5.

Fig 5. The patient wanted an idealized seven setup.

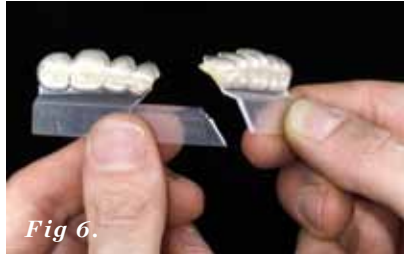


Fig 6.

Fig 6. A setup of the posterior teeth using the Q³ Pack available in an innovative wax-free pack.



Fig 7.

Fig 7. The first premolar was connected with the distal part of the canine using the small window in the setup support.

Fig 8. A rubber band and the markings on the Q³ Pack setup support are very helpful.



Fig 8.

Fig 9. The wings at the occlusal part of the setup support make possible an optimal check of the occlusal alignment in the transverse.



Fig 9.

Fig 10. When the hot wax cooled down, the setup support was detached from the teeth by controlled pressure on the wings.

Fig 11. The roughened surface was lightly smoothed again with an alcohol flame to a high gloss.

Fig 12. The new prosthesis in the patient's mouth.



Fig 10.



Fig 11.



Fig 12.

atrophy by parafunctional lateral shearing forces.

CASE PRESENTATION

An 86-year-old woman presented with complete upper and lower dentures. Rebasings, enlargements, and multiple fractures of the dentures over many years of function, as well as the massive wear of the posterior teeth, made it necessary to fabricate new dentures using the Veracia SA teeth with the Q³ Pack setup support.

The casts were mounted in the Schöttl HIP-Mount (Figure 1). Using this method, the upper cast was put over the incisal papillae and hamuli pterygoidei in the Camper's plane and brought parallel to the plane of the table (Figure 2).

The mandible was articulated with average movement using the encoded record template (Figure 3). In the next step, the center of the ridge was drawn and the models were analyzed. It showed that, for static reasons, the posterior teeth would have to be set up in crossbite. After this, the front teeth were set up in the mandible and maxilla with respect to esthetic principles (Figure 4) and checked by means of a model analysis.

In this case, the patient wanted an ideal seven setup, which could easily be completed with the Veracia SA teeth (Figure 5).

Next, the setup of the posterior teeth using the Q³ Pack was executed. These teeth are available in an innovative wax-free pack (Figure 6). With two simple actions, the set of teeth were divided and the teeth were aligned with the middle of the ridge. The first premolar was connected with the distal part of the canine using the small window in the setup support (Figure 7).

In the next step, the setup was aligned in the sagittal plane with the ridge center and lightly fixed with wax. Here, a rubber band and the markings on the Q³ Pack setup support are very helpful (Figure 8). The wings at the occlusal part of the setup support make possible an optimal check of the occlusal alignment in the transverse (Figure 9).

The teeth were fixed on the base by applying hot wax. When the hot wax cooled

down, the setup support was detached from the teeth by controlled pressure on the wings (Figure 10).

The maxillary teeth were then conventionally set up and brought into contact with the mandibular teeth. By incorporating the natural wear facets and the optimally matched occlusal surfaces, the Veracia SA teeth aligned with nearly perfect functionality by themselves. Whether in bilateral or lingualized concept, or, as in this case, set up in crossbite, Veracia SA provided efficiency, which means confidence for the constant user.

Wax was applied using a heated wax stick to complete the wax base, and the vestibular and buccal surfaces of the teeth were waxed up anatomically with a carver. The surface was briefly melted with an alcohol flame and given a natural gingiva look with a toothbrush. The roughened surface was lightly smoothed again with an alcohol flame to a high gloss (Figure 11).

At try-in, there was already a stable fit. Regulatory control movements and occlusal statics were acceptable. Only the length of tooth No. 13 was corrected because of the dynamic of the patient's lips. Completion of the prosthesis was done by the classical casting method.

The new prosthesis was well accepted by the patient, who commented that she felt content with it and was very satisfied with the comfort and esthetics of the teeth (Figure 12).

CONCLUSION

With the evolution of "natural wear" plus stops and free spaces, the new Veracia SA semi-anatomic teeth offer a perfect symbiosis of natural esthetics and function. The setup support Q³ Pack shortens the setup time considerably and can be used for a large part of the prosthetic job. For the patient, her new prosthesis was soon a visually appealing and functional set of teeth.

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- The Veracia SA and Q³ Pack were launched in the United States in May 2012.

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The Veracia SA line of semi-anatomical teeth are exceptional in quality and beauty and can be used for all common occlusal schemes. The Q³ pack affords greater productivity in the lab by allowing the technician to simultaneously set four posterior teeth on each side with precision and correct contact relation. Easy to set up, beautiful esthetics and highly durable! Veracia SA is an excellent product for any laboratory.”

Jim Collis, CDT
Collis Prosthodontic Lab
Chicago, IL
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