Digital solution for a prosthesis on a bar

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The patient, a male of 67 years old comes to the clinician attention with a circular fixed prosthesis with periodontitis. The clinician, Dr. Silvio De Simone, decided to proceed with the extraction and the subsequent insertion of six implants. We opt for a removable denture with a two degrees milled bar with threaded attachments screwed into the bar. In the incisors region were placed two spherical attachments with head of 2.5 mm and in the posterior region, having less space, we opt for two Ot Equator attachments with a low profile. The case study began in the laboratory starting from a total temporary prosthesis relined several times; after taking the impression and after the passivation of the bar, a control on the master model is performed (Fig. 1). At this stage started the digital design of the two bars (from Fig. 2 - 11) with the Dental Wings software. As a reference, we use the temporary prosthesis and this allows the operator the perfect control of the available spaces and the correct location and



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Fig. 1 — Master Model



Fig. 2 — Digital Master



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Fig. 3 — Digital Master without gums

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Fig. 4 — Digital Master occlusal view



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Fig. 5 — Digital Master with gums



Fig. 6 — Virtual Wax up



Fig. 7 — Virtual Bar

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Fig. 8 — Virtual bar with wax-up



Fig. 9 — Virtual control of the available spaces

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Fig. 10 — Virtual Placement of the attachments



Fig. 11 — CAD project completed



Fig. 12 — Laser melting bar



Fig. 13 — Rectified bar





Fig. 14 — Bar and counter-bar



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Fig. 15 — Work finished in the laboratory



Fig. 16 — Bar in the mouth

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Fig. 17 — Finished work





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Figs. 18 to 20 — Retentive components used r le patient.

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the type of attachments to be positioned (Fig.9 - 11). As mentioned above two Ot Cap threaded spherical attachments were positioned in the anterior region and in the posterior region two Ot Equator threaded low profile attachments considered to be the most suitable for the project (Fig.18 - 20). It is then produced a laser melting bar, in which will be bonded the threaded sleeves for the threaded spherical attachments. The production of the superstructure is performed in chrome cobalt with the conventional lost cast technique (Fig.14). The last steps are the mounting of the teeth (Fig.15) the curing of the resin and the insertion of the prosthesis are excellent. After one month, a check is made and the patient claims to be extremely satisfied. The stability reached is excellent and the daily hygiene of the prosthesis is easily manageable. In contrast with the old prosthesis, the new one has no palate providing a improved comfort to the patient.