

A modified approach to hybrid screwed prosthesis over implants

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Background: Hybrid screwed prosthesis over implants is a valid approach, specially in extremely atrophic maxillaries. However, the screws channel access could, in some cases, affect the occlusal stability. In the other hand, cemented prosthesis usually compromise aesthetics in these cases, where a severely affected ridge is present, with long unnatural crowns, resulting in patient discontent.

Aim/Hypothesis: To develop an alternative option for extremely atrophic maxillaries, combining the benefits of both hybrid screwed and cemented prosthesis

Material and Methods: Five patients, with an extremely atrophic upper maxilla, were selected to try this new approach. Six implants were placed in each case. Following the osseointegration period, impressions were made and models were placed in an articulator. A metal substructure was made to fit over the implants by means of screws. This structure is like a bar, joining all implants, but also includes abutments for cemented crowns in the coronal part. After a clinical try in of this structure to confirm an adequate fitting, pink porcelain was added in the buccal aspect, to give better aesthetics, and conventional crowns were made to be placed over the abutments. After completing the laboratory work, prosthesis was delivered to the patient. First, the bar structure was screwed over the implants and the screws were tightened at 32 Ncm. Then the screws access holes were sealed with a temporary cement. Finally, crowns were cemented over the abutments included in the bar, using a specific implant cement.

Results: There were not complications during the fabrication process. Patients are, up to date, highly satisfied with the functional aspects and the aesthetics. All cases are in adequate function for periods ranging from 12 to 30 months.

Conclusions and Clinical Implications: Within the limitations of this pilot study, the proposed approach seems to be adequate, combining the benefits of the two prosthetic options. A rigid structure splinting all the implants, with pink ceramic to improve aesthetics, and with cemented crowns to avoid access holes. The short term follow up is showing good results regarding function and aesthetics. However, more cases and longer follow up periods are needed.