

BioManagement Complex™ - the basis for predictable esthetic transitional contour

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In this complex case of immediate placement and loading, Astra Tech BioManagement Complex™ supported and preserved the esthetics and functional results by maintaining marginal bone and healthy peri-implant tissues.

In cases like this, the starting point is always the desired cervical contour for the new crown. If placing the implant 3mm from this contour, the desired biologic width can be created. But it's important to remember that the stability of cervical buccal tissue is the ultimate determinant of esthetics. This means, preserving this soft tissue architecture while also ensuring optimum

marginal bone levels. In this case, the Astra Tech BioManagement Complex is the basis for predictable esthetic transitional contour.

Complex case, predictable outcome

This complex case of immediate placement and immediate loading in an edentulous maxilla, demonstrates how the BioManagement Complex works in practice. Starting with the desired cervical contour, the optimal implant 3-dimensional placement is created when using a 2mm/3mm depth rule from the cervical contour of the planned crown indicated by the surgical stent.



Final results after a full upper arch rehabilitation – frontal and palatine view



Figure 1: Cervical contour design for fully maxillary rehabilitation – creation of the new esthetic information.



Figure 2: Before extraction.



Figure 3: After non-traumatic extraction – ready for immediate placement protocol.

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Figure 4: Surgical stent showing the new cervical contour.

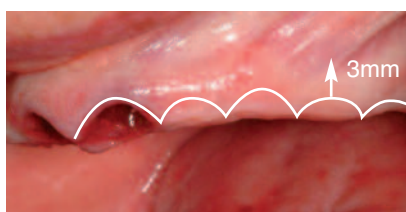


Figure 5: Implants are to be placed 3 mm from the cervical contour and 2 mm palatal to it.

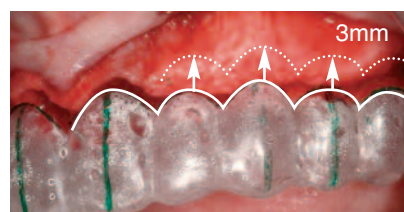


Figure 6: Before placing the implants, bone needs to be removed.



Figure 7: Try-in of provisional restoration before bone reduction – the cervical contour is in contact with the bone.

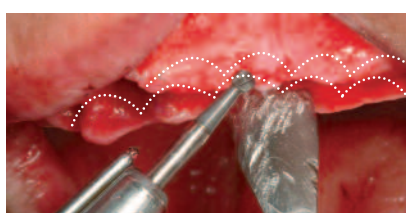


Figure 8: Bone is removed using the cervical contour of the surgical stent as reference.



Figure 9: Try-in of provisional restoration after bone reduction – bone is 3 mm from the cervical contour of the planned crowns.

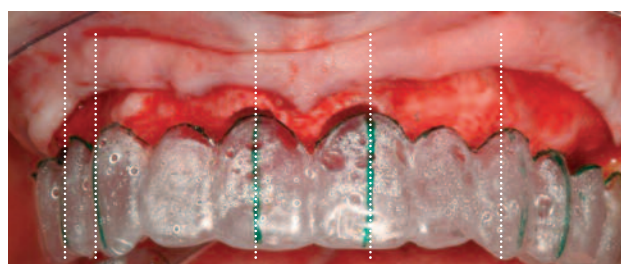


Figure 10: Localization of the ideal 3-dimensional implant position using the surgical stent.

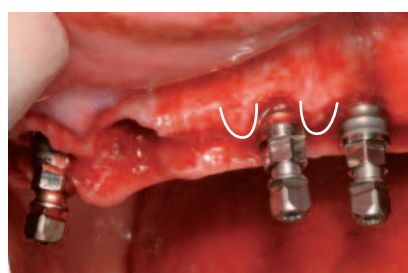
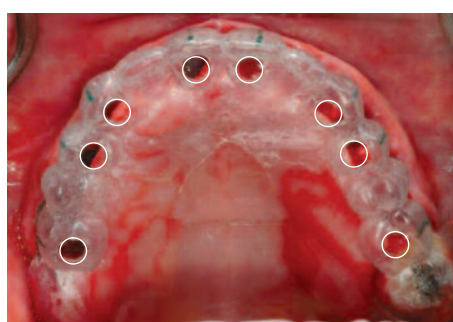


Figure 11: Implants are placed and primary stability is obtained. Osseous peaks are left to support the interdental papillae.



Figure 12: Closure, after abutment placement – ready for immediate loading.



Figure 13: Provisional restoration after immediate loading protocol.

Creating the optimal space

Rather than simply placing implants in available bone, the cervical surgical guide created from the wax-up allowed the removal of bone where necessary to create the optimal 3mm space from the planned crown in the area of implants and pontics – while leaving osseous peaks to support the interdental papillae.

The desired result

Once the desired architecture was established and implants placed, the BioManagement Complex supported and preserved the desired result. The provisional restoration, that had established the transitional contour, guided the soft tissue during the healing process and created the interdental papilla.



Figure 14: Healthy soft tissue after 12 weeks – interproximal papillae and space for ovate pontics.



Figure 15: New soft tissue contour with mesial and distal papillae between the implants.

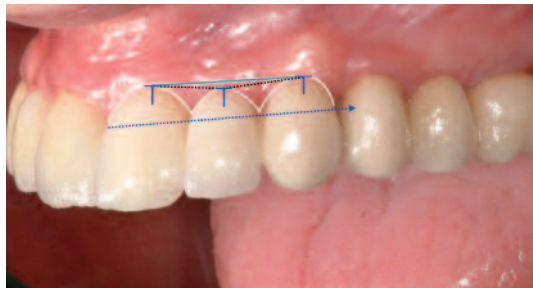


Figure 16: Maintenance of the initial esthetic design in the final restoration-position of the zenith and a natural balance of the gingival level.



Figure 17: Panoramic x-ray showing bone preservation – note the interproximal bone that supports the central papilla.

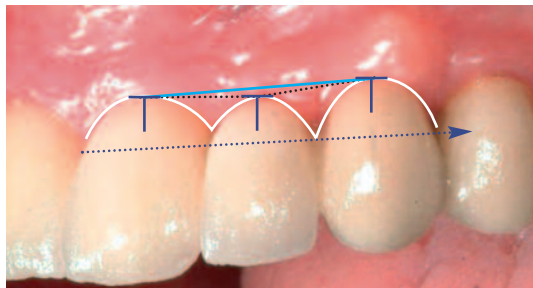


Figure 18: No black triangles can be seen after 1.5 years – maintenance of function and esthetics.



Figure 19: Final result.

Summary

In this case report, Dr. Rojas-Vizcaya demonstrates that by maintaining marginal bone and healthy peri-implant tissues, Astra Tech BioManagement Complex™ is the basis for an esthetic and functional treatment plan. He concluded that implant location should be based on the cervical contour of the planned restoration at 3mm

depth and 2mm lingual. In addition, adequate dimensions should be allowed in provisional restorations to guide the soft tissue.

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