

## SURGICAL DECISION MAKING PROCESS FOR A SAFE & PREDICTABLE IMPLANT PLACEMENT IN THE AESTHETIC ZONE

STATUS	1ST SURGERY	2ND SURGERY	3RD SURGERY
<b>TOOTH PRESENCE SOCKET I 2.1.A</b>	<ul style="list-style-type: none"> <li>-Immediate extraction.</li> <li>-Implant placement.</li> <li>-immediate loading.</li> <li>-Connective tissue grafting.</li> </ul>	NO	NO
<b>TOOTH PRESENCE SOCKET II 2.1.B</b>	<p>Depending on the severity of the defect we will perform:</p> <ul style="list-style-type: none"> <li>-Open flap surgery with adjacent papilla preservation or tunneling in cases of mild dehiscence defect.</li> <li>-Connective tissue grafting.</li> <li>-Immediate loading depending on severity of defect &amp; gingival biotype.</li> </ul>	-Early loading (6-8 weeks) to start with soft tissue management.	NO
<b>TOOTH PRESENCE SOCKET III 2.1.C</b>	-Tooth extraction.	<ul style="list-style-type: none"> <li>-Early Implant placement (4-6 weeks)</li> <li>-Immediate GBR with implant placement and immediate CTG or differed CTG.</li> </ul>	<p>-Possible CTG differed after 6-8 weeks (partial thickness flap) depending on the severity of the grafted site treated with late loading.</p> <p>Late loading after 4 weeks of soft tissue grafting is also an option depending on the healing.</p>

STATUS	1ST SURGERY	2ND SURGERY	3RD SURGERY
<b>TOOTH PRESENCE SOCKET IV</b> <b>2.1.C.1</b>	<ul style="list-style-type: none"> <li>-Tooth extraction.</li> <li>-Socket preservation with biomaterial preferably mixed of Allograft-Xenograft-Autogenous for Bone Regeneration in cases of GBR.</li> <li>-The use of GF, PRGF will be mandatory in this situations</li> </ul>	<ul style="list-style-type: none"> <li>-Implant placement after 6 months.</li> <li>-Immediate loading or differed depending on the initial stability of the implant.</li> <li>-CTG.</li> </ul>	<ul style="list-style-type: none"> <li>-Provisional management or creation depending on the periimplant gingival margin apico-coronal migration.</li> </ul>
<b>TOOTH PRESENCE PERIO</b> <b>2.2.D</b>	<ul style="list-style-type: none"> <li>-Tooth extraction.</li> <li>-Implant placement.</li> <li>-Immediate loading*</li> <li>-CTG*</li> </ul>	<ul style="list-style-type: none"> <li>-Possible CTG depending on the case*</li> </ul>	NO
<b>TOOTH PRESENCE PERIO</b> <b>2.2.E</b>	<ul style="list-style-type: none"> <li>-Tooth extraction.</li> </ul>	<ul style="list-style-type: none"> <li>-Early Implant placement (4-6 weeks)</li> <li>-Immediate GBR with implant placement and immediate CTG or differed CTG.</li> </ul>	<ul style="list-style-type: none"> <li>-Possible CTG differed after 6-8 weeks (partial thickness flap) depending on the severity of the grafted site treated with late loading.</li> <li>Late loading after 4 weeks of soft tissue grafting is also an option depending on the healing.</li> </ul>
<b>TOOTH PRESENCE PERIO</b> <b>2.2.F</b>	<ul style="list-style-type: none"> <li>-Tooth extraction.</li> <li>-Socket preservation with biomaterial preferably mixed of Allograft-Xenograft-Autogenous for Bone Regeneration in cases of GBR.</li> <li>-The use of GF, PRGF will be mandatory in this situations</li> </ul>	<ul style="list-style-type: none"> <li>-Implant placement after 6 months.</li> <li>-Immediate loading or differed depending on the initial stability of the implant.</li> <li>-CTG.</li> </ul>	<ul style="list-style-type: none"> <li>-Provisional management or creation depending on the periimplant gingival margin apico-coronal migration.</li> </ul>
<b>MILD ATROPHY</b>	<ul style="list-style-type: none"> <li>-implant placement.</li> <li>-Immediate Loading.</li> <li>-Immediate or differed CTG depending on the severity of the GBR performed.</li> </ul>	<ul style="list-style-type: none"> <li>-Possible CTG depending on the case*</li> </ul>	<ul style="list-style-type: none"> <li>-Provisional management or creation depending on the periimplant gingival margin apico-coronal migration.</li> </ul>

STATUS	1ST SURGERY	2ND SURGERY	3RD SURGERY
<b>MODERATE ATROPHY</b>	-Implant placement. -GBR. -CTG*	-Early loading (6-8 weeks) to start with soft tissue management.	-Provisional management or creation depending on the periimplant gingival margin apico-coronal migration.
<b>SEVERE ATROPHY</b>	-GBR. -Block graft. -Cortical & Autogenous Khoury Technique. Etc...	-Implant placement at 6 months. -CTG*.	-Late loading (3 months) to ensure secondary stability achievement of the implant at a grafted site.

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\*CTG: Connective Tissue Graft.

\*GBR: Guided Bone Regeneration.

\*ISQ: Implant Stability Quotient.

## ADDITIONAL FACTORS TO CONSIDER AT THE TIME OF PERFORMING AN AESTHETIC IMPLANT PLACEMENT IN THE AESTHETIC ZONE

1-. We assume that in those cases with severe lower anterior crowding along with a deep overbite, or patients periodontally not controlled / compromised, heavy smokers, impairment of immune system etc might not be able to become neither candidate for implant placement nor immediate loading.

2-. This classification is completed assuming that the buccal gap will always be filled with biomaterial selected by the clinician according to his or her consideration along with the biological purpose.

3-. Preferably whenever the immediate loading is not possible, a fixed provisional restoration will be indicated such as Maryland bridge in order to avoid movements of the prosthesis. The contact with the soft tissues will always be maintained during the healing process to drive the tissues avoiding ischemia or such contact when 3D regeneration is intended, specially at vertical ridge augmentation procedures.

4-. The immediate, early or late loading will depend on the ISQ values, testing primary stability in the first and second case or secondary stability on the third case scenario.

The higher ISQ values when testing at immediate loading situation the better prognosis for the implant and a lower chances of failure during the healing phase.

5-. We must ensure avoiding contact with antagonist during the osseointegration time in order to avoid lateral forces that might promote a fibrointegration around our implant testing centric and excursive movements.

6-. The use of Connective Tissue Graft immediately or in a second stage surgery will also depend on the original amount of CT at the regenerated site, patient Biotype along with the

amount of Regeneration intended since big Regeneration Procedures sometimes require not to over disturb the area. Doing too many things at the same time might impair the body healing response.

7-. Tunnelling techniques in cases of immediate extraction and implant placement would be limited to mild defects on the buccal plate derived from accidental trauma with the consequent vertical dehiscence of the buccal plate since at moderate or severe bone loss, the edges of the fracture, presence of granulomatous tissue, periosteum adherence and many other factors represent a very difficult process if performed by a blind technique is intended.

8-. By leaving remnants of periosteum attachment, residual cysts, soft tissue or granulation tissue in the area, we are promoting the encapsulation of our particles with the consequent particle loss and bone volume collapse.