Initially implant were left to osseointegrate and remain unloaded for 3 to 4 months in mandibles and 6 to 8 months in maxillae. Recently immediate loading of implants at the time of placement (or within the first 72h) has become a viable treatment alternative, mainly in the aesthetic zone; this approach allows decreasing the patient’s comfort, the treatment’s duration and costs. In fact the patient could enter with an edentulism and leave the same day with an aesthetically acceptable implant-supported provisional crown, which makes this approach very attractive. However, it is necessary to clarify its outcomes and compare them with the ones of the delayed loading method.

**RESULT:**

**Insertion torque:**

It has been reported by many publications that high insertion torques guaranty a good initial stability of the implant leading to increase the osseointegration. (Al-Nawas B. 2013, Cannizzaro G. 2012)

**Underdrilling:**

To increase the implant primary stability, it has been recommended to underprepare the implant site using underdimensioned drills. Schincaglia and al. 2016 suggested to use the 3.2mm twist drill as a final drill for Class III and IV of bones and the 3.7mm twist drills as the final drill for Class I and II quality bone respectively.

Esposito and al. 2015 proposed to use in case of hard bone quality the sequence of drills suggested by the manufacturer. However, in case of medium bone quality, they recommended underpreparing the site using a final drill of one size smaller than the one suggested; and in case of soft bone, underpreparing the site using a final drill of two diameters smaller than suggested.

**Quality of bone:**

It was stated that in case of critical bone quality some precautions are necessary such as: underpreparation of the implant sites, use of implant designs favouring achievement of high insertion torques (35 Ncm or more), and correct control of loading (Esposito and al. 2016).

**Surface modification:**

The latest generation of implant surfaces are characterized by a moderately rough configuration that has demonstrated higher osseointegrate insertion torques (> 50 Ncm) as well as higher osseointegrate insertion torques as a possible cause of compression necrosis of the bone, animal and RCT human studies have shown no detrimental effect of high insertion torques (> 50 Ncm or even to 80 Ncm) on peri-implant bone healing. (Schincaglia GP. 2016, Cannizzaro and al. 2012, Esposito M. 2015)

**Implant modified surface** have also been reported as a successful alternative.

Cannizzaro and al. 2012 excluded in their trials patients with poor bone quality (soft bone). While others didn’t mention the quality of bone in their trials.

Additionally, if considering early versus immediate implant loading, Esposito and al. 2016 specify that it might be wiser to load implants immediately, since there are no additional advantages or benefits to early loading, and patients are more likely to prefer immediate loading.

**DISCUSSION:**

An interesting trial of a medium-term follow-up (4 years) (2012) presented some interesting hints on whether it is possible to load immediately or early at 6 weeks short implants of 6,5 mm length placed according to a flapless procedure and concluded a success rate of 93.3% suggesting that immediate or early loading of flapless-placed implants are both viable procedures. The follow-up, no implant failed, marginal bone levels remained virtually stable and the minor additional complications that occurred were related to insufficient levels of oral hygiene.

There is still a debate regarding the difference between immediate implant loading and non-loading (immediate provisionalisation), we meant to ignore this parameter because even non-osseointegration rests become essentially functioning when mastacing.

Only one RCT investigated this trend, but the results of this study did not provide a conclusive answer on whether immediate non-loadocclusal may decrease implant failures when compared to immediate occlusal loading. (Heinemann F. 2016)

Moreover, in all the RCTs reviewed the operators were highly experienced in immediate occlusal loading procedures. Thus the generalization of the findings should be handled with care.