

Bone resorption around dental implants

Implant supported dental restorations are a very common way to realize fixed or removable dentures nowadays. Implants are placed in the bone and they “glue” to the bone thanks to a biological pathway known as osseointegration. In order to reach the bone, the dental surgeon can either cut the gingiva (flap or conventional surgery) to expose the underlying bone or pass directly through the gingiva with the burs (flapless surgery) without elevating a flap. This latter procedure is more conservative but has some major constraints. Our work analyzed if the type of surgery (flap or conventional vs flapless surgery) could have some benefits on the long run in bone maintenance around dental implants. No obvious differences could be detected after 3 years after implant insertion in the two groups studied.

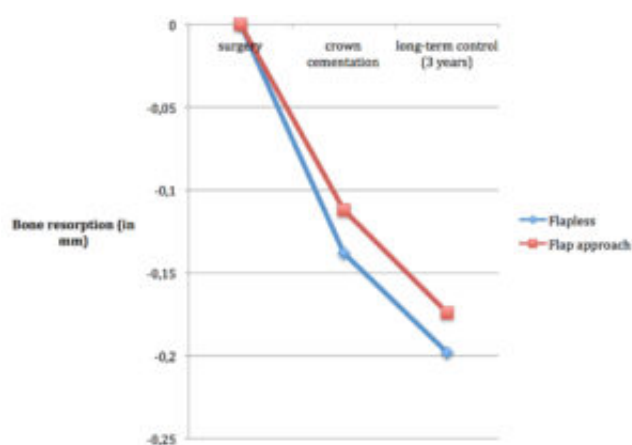


Fig. 1.

What does this mean to the general dental practitioner and to the patient? Though flapless surgery is less invasive and permits a very rapid wound healing the risks that the patient and the operator have to face should be known. First of all, cutting through the gingiva does not permit to keep all the gingiva which in the conventional way can then be replaced around the implant neck. By cutting through the gingiva with the bur we loose valuable tissue. Second, the surgeon drills in the bone without being able to see the bone (because the soft tissues hide it to the eye). Thus minor or major bone damages, caused by inappropriate drilling, may be not reported hampering the long term results of the reconstruction.

What difference will this piece of evidence make to the patients and to the general dental practitioners? Basically the knowledge that if the anatomical situation of the jaws of a given patient is very favourable, meaning that the volumes of the bone and of the soft tissues are well preserved, flapless surgery is a valid treatment option. In all cases where patients do not have ideal anatomical conditions, conventional surgery should be preferred in order to facilitate correct

positioning of dental implants although this may be related to an increased discomfort during wound healing for the patient.

The graphic explains the results obtained by our research: On the horizontal axis the keypoints used for the assessment are presented. On the vertical axis the vertical bone resorption occurring over time around implants as assessed by X rays, is shown. The graphic shows how the bone resorption in the first period (from surgery to crown application) is slightly higher in the flapless group than in the open flap conventional group, while in the second period (from crown application to a 3 years postoperative visit) the two groups are quite similar. However, statistics didn't show any difference between the two options, even in the first period of assessment.

Siervo Sandro

Scientific Director, Maxillofacial Surgery Department, Istituto Stomatologico Italiano, Milan, Italy

Publication

[Flapless Versus Traditional Dental Implant Surgery: Long-Term Evaluation of Crestal Bone Resorption.](#)

Pisoni L, Ordesi P, Siervo P, Bianchi AE, Persia M, Siervo S
J Oral Maxillofac Surg. 2016 Feb 13