



Extraction socket preservation with or without membranes, soft tissue influence on post extraction alveolar ridge preservation: a systematic review

ABSTRACT

After tooth extraction, nowadays the clinicians can choose between different options in order to reduce the amount of hard and soft tissue reabsorption over the time, from alveolar ridge preservation to immediate implants and others techniques, each one with specific indications.

A wide variety of alveolar ridge preservation treatment modalities have been described in the last 20 years, including socket grafting with a biomaterial alone, overbuilding of the facial bone wall, occluding the access to the socket by interposing a barrier element, or a combination of some of them, with or without using soft tissue grafts to allow primary intention healing.

Even if several systematics reviews giving the clinicians the state of art of these techniques are already available, there is limited information based on clinical trials assessing the real advantages of alveolar ridge preservation techniques. Moreover, it is still unclear the need of a bone graft, a membrane or only a soft tissue graft. Hence, the purpose of this systematic review was to analyse the outcome of socket preservation with and without membrane and determine the influence of soft tissue graft for extraction socket preservation.

The initial search identified a total of 1524 articles, and after the following screening, a total of six articles met the inclusion criteria and were selected for this systematic review. Three were randomized control trials, one was a split-mouth randomized control trial and two were designed as clinical trials. Among the materials used in the trials, a preservation procedure with corticocancellous porcine bone (OsteoBiol® mp3® TecnoSS®, Giaveno, Italy) and collagen membrane (OsteoBiol® Evolution, TecnoSS®) was included.

The six selected papers presented a wide heterogeneity of treatments used, evaluated variables and observation period and this represented a clear limitation, making impossible to recommend any specific techniques and/or material to achieve better results. Anyway, the limited data showed that the use of membrane seems to achieve better results.

CONCLUSIONS

Based on radiological, clinical, histological and histomorphometric results, it can be concluded that the described alveolar preservation techniques can decrease the dimensional reduction of the alveolar ridge after tooth extraction. Moreover, the studies comparing the use of the alveolar preservation techniques with and without membrane showed that membrane application allows to achieve better results.

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