The predictability of periodontal plastic surgery for root coverage procedures has been extensively investigated (Cairo et al. 2014; Graziani et al. 2014). However, most of the studies in the literature are based on a 6-months follow-up. Recently, some articles reported the long-term results of previously published clinical trials (Rasperini et al. 2018).

Hence, the number of drop outs or the limited sample size prevent to assess whether one procedure is superior to another in maintaining the stability of the gingival margin (REC) over time. Similarly, the change of keratinized tissue width (KT) and clinical attachment level (CAL) has not been described yet.

Therefore, the aim of the present study is to evaluate the influence of different root coverage procedures on the stability of the gingival margin, KT and CAL over time and to investigate possible predictors related to it.

**MATERIAL AND METHODS**

The review protocol was registered and allocated the identification number CRD42018104365 in the PROSPERO International Prospective Register of Systematic Reviews.

The focus questions were the following: “how do the different root coverage procedures affect the change in the gingival margin level (REC), keratinized tissue width (KT) and clinical attachment level (CAL)” and “are there any predictors of the stability of these outcomes?”

Only randomized clinical trials (RCTs) investigating root coverage procedures that provided the results with at least two time points (≥ 3 months) were considered. The change in recession depth (REC), KT width (KT) and CAL (dCAL) were only calculated between the follow-up visits, while changes between follow-up and baseline were not considered.

**BACKGROUND**

Articles that provided the patients specific details on oral hygiene instruction (including brushing technique and the use of soft-bristle toothbrush) demonstrated a significantly more stability of the gingival margin overtime, as well as the KT width (p<0.01).

The network meta-analysis showed that utilizing a graft (in particular ADM or CTG) was significantly correlated to higher stability of the gingival margin compared to when a graft was not used for root coverage (EDM, CAF, GTR).

Although the pattern seemed to show discrepancies among the techniques in terms of KT and CAL changes, the network meta-analysis failed to demonstrate such differences.

In line with Pini Prato et al. (2018), KT width at baseline was a predictor for the stability of the gingival margin in the long-term.

In addition, the results confirmed that CAF + CTG is associated with greater gingival margin stability than CAF alone. Similar conclusions were previously reported by Pini Prato et al. (2013) and Rasperini et al. (2010).

As suggested by Rebele et al. (2014), it can be speculated that the greater stability of the gingival margin found when a graft was used (ADM and CTG) compared to CAF alone. Similar conclusions were previously reported by Pini Prato et al. (2012) and Rasperini et al. (2010).

Furthermore, this study corroborates the importance of the post-operative brushing regimen on the stability of the outcomes (Azzaroni et al. 2016).