

# Correlation between marginal bone level and dimension of papilla in single-implant

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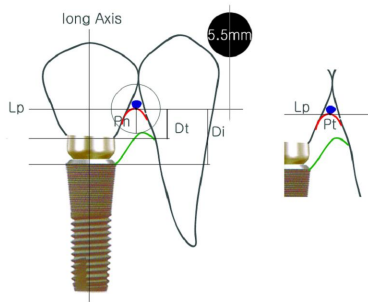
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## Object

To evaluate which parameter, (1) marginal bone level of implant or (2) adjacent tooth, correlates with the dimension of interproximal soft tissue in single-implant restorations.

## Methods

The subjects of the present study had implant prosthesis in place longer than 1 year. Periapical of 21 single-implant restorations were taken including their adjacent natural teeth. Before taking an X-ray, radiopaque material was placed on the top of the papillae to mark its positions. A virtual horizontal line (Lp) perpendicular to the axis of the fixture was drawn, passing through each papilla top. Distances from the most coronal point of the alveolar bone contacting the implant surface to line Lp (Di) and from that of the adjacent natural tooth to line Lp (Dt) were measured. The dimension of interproximal soft tissue was determined by measuring the shortest distance from the top of the papilla to the alveolar ridge (Ph).



The correlation between each variables was calculated using Spearman's rank correlation ( $p < 0.01$ ).

## Results

The mean Di was  $3.04 \pm 0.84$ (SD), the mean Dt was  $5.23 \pm 1.62$ (SD) and the mean Ph was  $3.18 \pm 0.97$ (SD). Between Dt and Ph, correlation was significant ( $\rho=0.80$ ). Between Di and Ph, however, correlation was not significant ( $\rho=0.35$ ).

## Conclusion

The bone level of adjacent natural teeth seems to have significant correlation with the dimension of interproximal soft tissue between natural tooth and implant.