

56. Evaluation of effect of platform switching on crestal bone after prosthetic loading

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Objective: Crestal bone loss(cbl) around an implant during the first year of function is inevitable . Platform switching(ps) is a design modification to reduce cbl. Related studies have reported controversial findings for the effect of ps on crestal bone preservation. This study compared the bone loss between ps and platform matched(pm) implants using same implant geometry, surgical protocols and loading mechanism in all patients.. **Material and method:** 44 implants, 22 each in group a (pm) and group b (ps), were placed crestally using delayed loading protocol and bone loss was evaluated at a follow up of 3 and 6 months after prosthetic loading. Also mmp 8 levels were assessed in periimplant crevicular fluid around the test and control implants.. **Results:** the amount of bone loss reported in at baseline (time of loading) was 0.76 ± 0.45 mm in pm group and 0.56 ± 0.47 mm in ps group. After 6 months the total bone loss in ps group was 0.99 ± 0.41 mm and in pm group was 0.81 ± 0.51 mm. Prosthetic phase bone loss having supposed influence of prosthetic design was 0.26 mm in ps group and 0.24 mm in pm group and was statistically insignificant $p=0.832$). These results showed a positive correlation with levels of mmp8 in pif . . **Conclusion:** significant bone loss occurs at the implant site during surgical phase and also within 6 months of prosthetic loading using either platform matched or switched abutments. However, altering the abutment diameter doesn't influence bone resorption at implant site.

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