

Efficacy of non-surgical periodontal therapy in reducing periodontal indexes in kidney-transplant patients.

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Aim: kidney-transplant patient must take cyclosporine-A and calcium channel blockers chronically. Both medicines involve a gingival overgrowth (G.O.) as a collateral effect and this is due to their dosage: it appears 1-3 months after the beginning of the therapy. The prevalence of the G.O. is 84%. The G.O. originates from anterior interdental papilla and it appears as a red and soft tumefaction, that becomes more fibrinous as time goes by. The G.O. takes place in apical-coronal verse and also in vestibular-lingual verse and it looks like a gingival hypertrophy and hyperplasia, which is due to an abnormal increase of the number of fibroblasts into gingival connective tissue. The G.O. involves a great aggregation of extracellular Matrix, or less degradation of it, or both these processes simultaneously. The G.O. leads to the formation of pseudopockets, which interfere with the correct oral hygiene practices. This condition gives rise to mature plaque retention, that leads to infection, inflammation and the increase of the G.O. This condition becomes worse because of bad pre-transplant oral hygiene state. The aim of this study is to estimate the efficacy of non-surgical periodontal therapy in reducing the G.O. in kidney-transplant patient.

Materials and methods: a sample of 32 simple random kidney transplant subjects was enrolled in this study (mean age: 58,44; range: 33-81, 21 m., 11f.). All of them were taking cyclosporine A and calcium channel blockers. Patients taking idantoin, pregnant women, patients suffering from diabetes mellitus or people who have undergone gingival surgery were excluded. The study started on November 2012 and finished on September 2013. Periodontal indexes and Professional oral hygiene practices were performed by the same dental hygienist. The plaque, calculus, bleeding, G.O. and probing depth indexes were evaluated at T0, T1, T2, T3 (at 0, 2, 4, 6 months respectively). Every time the same oral hygiene protocol was applied: non-surgical periodontal therapy with ultrasonic instruments above and below the gum. **Results:** 787 teeth analysed and 4722 periodontal sites probed. Plaque index (PI), calculus index (CI) and bleeding index (BoP) show significant statistical reduction ($p < 0,0001$). T-test was used for statistic analysis. PI at T0=82,09%, at T3=29,89%/ CI at T0=53,44%, at T3=23,70%/ BoP at T0=71,98%, at T3=26,18%. Probing depth (PD), at six-monthly control, shows a significant statistical reduction ($p < 0,0001$). PD 1-3 mm at T0=16,58%, at T3=30,45%. PD 4-6mm at T0=74,06%, at T3=64,70%. PD 7-9 mm at T0=9,36%, at T3=4,85%. G.O. At T0=54,93%, at T3=44,98%, with a significant statistical reduction ($p < 0,0001$). **Conclusions:** the applied oral hygiene protocol is simple but effective in

reducing drug-induced gingival overgrowth in kidney-transplant patient taking Cyclosporine-A. These clinic results assure a better oral health, improving the quality of life from an aesthetic and functional point of view.