

Effectiveness of buccal pouch grafting in minimizing loss of alveolar dimension

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The study's purpose was to study buccal pouch grafting (BPG) with xenograft, freeze dried bone allograft (FDBA), or FDBA + decalcified FDBA (DFDBA) on alveolar ridge width preservation and overlying soft tissue thickness at dog premolar extraction sites. **Materials and Methods:** In this animal study, 4 dogs had their mandibular first premolar (P1) and distal roots of P2, P3, and P4 extracted (after endodontic treatment of the mesial roots) bilaterally. A small buccal pouch was created at each extraction socket and four treatments tested: nothing, xenograft, FDBA, or FDBA + DFDBA. Casts made pretreatment and at 1 and 3 months after treatment allowed measurements of buccolingual alveolar ridge width (BLRW), while overlying buccal soft tissue thicknesses were measured clinically. Data were assessed using analysis of variance to compare changes in soft tissue thickness and BLRW between times and treatments. Tukey–Kramer adjustment for multiple comparisons was applied for doing post hoc, pairwise comparisons. Results were considered significant if $P < 0.05$. **Results:** Control sites showed significant ($P = 0.0067$) decreases in soft tissue thickness over time while there was a trend for increased soft tissue thickness at all grafted sites. There were significant losses in BLRW over time for control ($P = 0.0032$) and FDBA groups ($P = 0.015$) with a trend for loss with FDBA + DFDBA. Pairwise comparison using Tukey–Kramer adjustment revealed significant increases in BLRW from T1 to T3 for the xenograft group relative to all the others. **Conclusion:** BPG using xenograft is effective in maintaining hard and soft tissue stability following tooth extraction.

Biography

Dr Birang has completed his Msc of periodontology from Azad Esfahan University and Implant fellowship studies from Shahid Beheshti medical University School of Dentistry. He is assistant professor working at the International Campus of Iran University of Medical Sciences (IUMS). He is the Director of Dental Education and Deputy Head of the School of Dentistry at the IUMS.

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