The effect of platelet-enriched fibrin glue on bone regeneration in autogenous bone grafts.

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Abstract:

Objective. The aim of this study was to examine the ability of platelet-enriched fibrin glue to enhance bone formation in critically sized defects in the dog mandible. Study design. Seven adult female mongrel dogs underwent continuity resections on both sides of the mandible; 1 defect was reconstructed with the original particulate bone mixed with platelet-enriched fibrin glue, and as a control the contralateral defect was reconstructed with the original particulate bone alone. Results. Biopsies after 6 weeks showed that the addition of platelet-enriched fibrin glue enhanced new bone formation in the autogenous bone grafts. Conclusion. Our data suggest that fibrin nets formed by fibrinogen, in combination with growth factors present in platelet-enriched fibrin glue, might effectively promote bone healing at bone graft sites.