

Osteogenesis induced by the combination of growth factor, fibrin glue and coral. Development of a substitute for autologous bone graft. Experimental study in the rabbit. [French]

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Abstract:

A triple mixture of TGF-beta, fibrin glue and natural coral skeleton granules (madreporic calcium carbonate) was tested in a rabbit bilateral cranioplasty model. Three-dimensional CT scan and histomorphometry demonstrated that, at one month and at two months, this association produced significantly more bone tissue than other associations, especially growth factor or coral alone. The rate of mineralization was significantly increased bilaterally in all animals having received TGF-beta. Coral resorption was also accelerated by growth factor and was replaced by histologically normal bone after two months. We emphasize the potentiation of TGF-beta by fibrin glue and natural coral skeleton and its potential application as a bone substitute.