A biomaterial derived from natural corals with surgical applications is the calcium carbonate Biocoral. Since 1992 the author has been using this material as a bone graft substitute in maxillofacial surgery. Eighty-nine clinical implantations were done in 68 patients for different indications. The results suggested that coral grafts are well tolerated and are simultaneously partially ossified as the calcified skeleton is resorbed. Clinical cases show that use of this material has been successful.