Combined use of hair and fibrin glue for soft tissue augmentation: Experimental study.

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Publication Date: 2006

Abstract:

A vast variety of alloplastic materials together with autogenous grafts have been used for the correction of contour deformities related to aesthetic and reconstructive purposes. Despite a number of well-tolerated materials, the ideal has not yet been reached, although well-tolerated autogenous grafts have higher rates of resorption and distortion. The limited volume of autogenous grafts and concerns about donor-site morbidity may obligate the surgeon to use implantation materials. Covering almost every property of an ideal implantation material, hair, an organic autogenous nonvital tissue, was used for soft tissue augmentation in this experimental study. Hair pellets of 10 New Zealand rabbits were prepared and shaped as 1 x 1 x 1-cm cubes with the help of fibrin sealant, then inserted subcutaneously. The materials were evaluated 4 months later. No complications such as infection or extrusion were seen. The materials were intact, with no signs of resorption, but the shapes were distorted due to the pressure of the surrounding tissues. Histopathologic findings also demonstrated that the hair was well tolerated by the adjacent tissues. Different processes may enable hair to be used as a filler material in clinical practice. Well-tolerated, nonresorbable injectable materials or shaped implants may be obtained at low cost using hair.