# The fixation of a collagen type I/III membrane in the distal radioulnar joint of a human cadaver model.

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## Abstract:

Damage to the cartilage of the distal radioulnar joint frequently leads to pain and limitation of movement, therefore repair of this joint cartilage would be highly desirable. The purpose of this study was to investigate the fixation of scaffold in cartilage defects of this joint as part of matrix-assisted regenerative autologous cartilage techniques. Two techniques of fixation of collagen scaffolds, one involving fibrin glue alone and one with fibrin glue and sutures, were compared in artificially created cartilage defects of the distal radioulnar joint in a human cadaver. After being subjected to continuous passive rotation, the methods of fixation were evaluated for cover of the defect and pull out force. No statistically significant differences were found between the two techniques for either cover of the defect or integrity of the scaffold. However, a significantly increased mean pull out force was found for the combined procedure, 0.665 N (0.150 to 1.160) versus 0.242 N (0.060 to 0.730) for glue fixation ($p = 0.001$). This suggests that although successful fixation of a collagen type I/III scaffold in a distal radioulnar joint cartilage defect is feasible with both forms of fixation, fixation with glue and sutures is preferable. 