All-arthroscopic technique of biological meniscal tear therapy with collagen matrix.

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Abstract:

PURPOSE: The number of meniscus surgeries, including partial or complete meniscectomy, has increased considerably with the progress in knee arthroscopy. An analysis of treatment results, carried out at several centres by numerous study groups, showed a development of early degenerative changes in the knees of treated patients.

METHODS: This study is aimed at developing a fully arthroscopic technique to treat meniscal tears by suturing and wrapping them in collagen matrix, followed by injection of liquid bone-marrow collected from the tibial proximal epiphysis, into the area of meniscal lesion.

RESULTS: In this paper, we presented arthroscopic technique for wrapping meniscal tears using the collagen matrix sutured with the Fast-Fix sutures.

CONCLUSIONS: Proposed surgical technique is not straightforward to perform, but can be learned by adhering to strict arthroscopic principles. The use of collagen matrix and bone marrow aspirate from bone-marrow blood, including stem cells, creates favourable biological conditions for meniscus healing, which may increase the rate of healing.