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Intra-Articular Injections of Autologous Conditioned Serum to Treat Pain from Meniscal Lesions

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Abstract

Routine use of biological therapies is in its early stages. Techniques involve stem cells, platelet preparations, recombinant growth factors and autologous conditioned serum, often combined with surgery. The objective of this case analysis was to document effects of intra-articular autologous conditioned serum injections in outpatients with knee pain associated with meniscal defects. Autologous conditioned serum was prepared from patients' blood by centrifugal separation from cellular components using a specialized device (EOT®II, Orthokine). Outpatients (n = 47) with heterogeneous knee meniscus lesions (76.6 % traumatic knee injury) were injected once weekly (average 5.2 applications). Average age was 48.6 years (range 21–79). Oxford Knee Score and structural changes with the MRI Boston Leeds Osteoarthritis Knee Score were documented at baseline and 6 months. All analyses were performed retrospectively.

In 83 % patients, surgery was avoided during the 6-month observation period. Oxford Knee Score improved significantly from 29.1–44.3 ($p < 0.001$; best possible score = 48). Structural findings on MRI, measured by Boston Leeds Osteoarthritis Knee Score, showed significant improvement at 6 months (0.82–0.71, $p < 0.001$). This retrospective study implies that intra-articular autologous conditioned serum injection may be an effective treatment option for knee pain associated with meniscal lesions. Controlled studies of autologous conditioned serum treatment for meniscal lesions are advocated.

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