

Correlation between synovial fluid and serum IL-1 β levels after ACL surgery-preliminary report

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Abstract The possibility of controlling the harmful intra-articular influence of elevated interleukin (IL)-1 β synovial fluid concentration after anterior cruciate ligament (ACL) surgery could be useful. We investigated the correlation between serum and synovial fluid IL-1 β levels following ACL reconstruction.

We measured IL-1 β concentration periodically in three synovial fluid and four serum samples in each of 20 patients receiving either autologous conditioned serum (ACS) containing endogenous anti-inflammatory cytokines including IL-1Ra and several growth factors (group A) and placebo (group B). A decrease in IL-1 β synovial fluid concentration appeared to be more pronounced in absolute terms in group A.

In eight patients serum IL-1 β was detected on the 6th postoperative day. In four of them whose synovial fluid levels were over 10pg/ml on the 6th postoperative day, serum IL-1 β was detected on the 10th postoperative day.

The results were different in group B. Correlation between serum and synovial fluid IL-1 β appearance persists in patients after ACL surgery and ACS application. This study is an example of ACS influence on the ACL healing process controlling the IL-1 β levels on the basis of the serum IL-1 β detection.



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