

LYMPHSPIRATION**INVESTIGATION OF THE MECHANISM OF LYMPHOCYTE
INJECTION THERAPY IN TREATMENT OF LYMPHEDEMA WITH
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ABSTRACT

We previously employed intraarterial lymphocyte injection therapy in conjunction with standard non-operative treatment of peripheral lymphedema of various etiologies. In this study, we further evaluated the clinical outcome of this therapy in 46 patients with unilateral lymphedema of the extremities. The results showed combined therapy (lymphocyte injection with compression) was effective in 74% (34 of 46 patients) with dramatic reduction in lymphedema in 37% (17 of 46 patients). In the most recent 5 patients treated, we examined the expression of cell adhesion molecule of the lymphocytes (L-selectin) before, during and after lymphocyte injection therapy to study the putative pathomechanism of this treatment method. The expression of L-selectin, a lymphocyte-specific adhesion molecule, increased in the autologous lymphocytes obtained by a blood cell separator and in the lymphocytes from the peripheral blood after injection. Moreover, the lymphocyte fraction, which was positive for L-selectin and negative for CD3, a T-cell marker, decreased after lymphocyte injection. We postulate that the lymphocytes of L-selectin (+) and CD (-) remain in the affected swollen limb and play a role in an ill-defined immunologic responsiveness that potentiates reduction in edema.