Effectiveness of Leukocytapheresis for Refractory Foot Ulceration in Rheumatoid Arthritis

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Key words: foot ulcer, leukocytapheresis, rheumatoid arthritis

(Inter Med 47: 1763-1764, 2008)

DOI: 10.2169/internalmedicine.47.1440

An 86-year-old woman with a 30-year history of rheumatoid arthritis (RA) had an ulcer on her left foot since April 2007. The ulcer was painful and refractory to debridement and drugs such as vasodilators, antibiotics, and prednisolone for one year (Picture 1A). Leukocytapheresis (LCAP) therapy using CS-180S (Cellsorba, Asahi Kasei Kuraray Medical Co., Ltd., Tokyo, Japan) was carried out on March 19 and 26, 2008. Immediately after LCAP, the pain and local inflammatory symptoms of the ulcer improved, and the epithelium started to form (Pictures 1B, 1C). By April 24, the ulcer was completely cured (Picture 1D).

In patients with RA, the point and overall prevalences of foot ulceration are reported to be 3.39% and 9.73% (1). LCAP was originally aimed at improving arthritis in RA, but recently the effectiveness of LCAP for refractory ulcers in RA has been reported (2). LCAP has following effects:
redistribution of leukocytes from inflamed joints into peripheral blood (3); decreased levels in inflammatory cytokines such as interleukin (IL)-6, IL-15, and tumor necrosis factor (TNF)-α (4, 5); increased level in anti-inflammatory cytokine such as IL-10 (5); and decreased expression of CD11b and CD18 on granulocytes (4). Through these cellular and molecular mechanisms, LCAP may accelerate the healing process of inflammatory skin ulcers in RA. LCAP is recommended for refractory ulcers in RA.

References


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