

Summary

^{99m}Tc-DTPA-HSA Lymphoscintigraphy in Lymphedema of the Lower Extremities: Diagnostic Significance of Dynamic Study and Muscular Exercise

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The efficacy of lymphoscintigraphy was evaluated in 25 cases to clarify the diagnostic significance of dynamic study and muscular exercise in the diagnosis of lymphedema. ^{99m}Tc-diethylene triamine pentaacetic acid-human serum albumin (DTPA-HSA) was injected subcutaneously, and dynamic imaging was performed in 18 cases. Thirteen patients were asked to walk for 3 minutes. Qualitative evaluation of static images had sensitivity of 90% and specificity of 97%. Diagnostic criteria including qualitative evaluation of dynamic images were less specific (sensitivity 95%, specificity 76%). Interpretation of static images ob-

tained at one hour after injection in the patients without muscular exercise had sensitivity of 89% and specificity of 67%, whereas sensitivity was 92% and specificity was 100% in the patients with muscular exercise. Lympho-scintigraphy was reliable in diagnosis of lymphedema. Dynamic study was limited usefulness because of some false-positive cases. Muscular exercise accelerated migration of the tracer in normal extremities, and improved positive predictive value.

Key words: Lymphoscintigraphy, Dynamic study, Muscular exercise, Lymphedema.