Lymphatic vasculature: A cholesterol removal system

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Reverse cholesterol transport is a process in which accumulated cholesterol is removed from tissues, including the artery wall, and transported back to the liver for excretion. Little is known about how cholesterol is removed from peripheral tissues, but a better understanding of these mechanisms could help in the development of therapies that treat atherosclerosis and other cholesterol-related disorders.

In this issue of the *Journal of Clinical Investigation*, researchers led by Gwendalyn Randolph and colleagues at Washington University in St. Louis examined the role of the lymphatic system in RCT. The lymphatic system generally mediates transport of large molecules from the area around blood vessels into the blood. Randolph and colleagues tracked RCT in a mouse model of atherosclerosis with normal and impaired lymphatic growth. Mice lacking normal lymphatic growth retained more cholesterol in their aortas, indicating that lymphatic vessels are required for RCT in the aortic wall.

These findings suggest that therapies that support lymphatic transport could enhance cholesterol clearance from arteries. In a companion commentary, Carlos Fernandez-Hernando of New York University discusses how such therapies could be used to treat atherosclerotic vascular disease.

  More information: Lymphatic vasculature mediates macrophage reverse cholesterol transport in mice, J Clin Invest.

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