VISUALIZATION OF THE LYMPHATICS OF THE HEART AND THE MEDIASTINAL DRAINAGE PATHWAYS IN THE LIVING CYNOMOLGOUS (MACACA MULATTA) MONKEY


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ABSTRACT

Our interest in the effects of impaired cardiac lymph drainage on coronary atherosclerosis led us to study the cardiac lymphatic anatomy in the monkey, generally considered the ideal experimental animal for examining coronary artery disorders. Short-term and long-term studies to visualize the cardiac lymphatic system and its mediastinal drainage pathways in 14 living monkeys confirmed that the epicardial collecting lymphatic anatomy is comparable to that of man, dog, and pig. These lymphatics, and particular lymphatic drainage to the cardiac lymph node in the right mediastinum, are difficult to visualize, in good part, because lymph uptake of such tracers as India Ink and T1824 blue dye is extremely slow. By modifying our techniques and taking cognizance of the slow lymphatic uptake of the tracers, we have been more successful in visualizing the mediastinal cardiac lymph node. Though our studies confirm that the lymphatic drainage of the monkey heart is similar to that in other mammals, we conclude that the “monkey model” has several drawbacks to study the effects of impaired cardiac lymph flow because of the laborious requirements to visualize successfully the cardiac lymph node. Perhaps the development of new markers would make this lymphatic system more approachable for experimental investigation.