TISSUE PROTEIN WASHOUT IN SHEEP LUNG LYMPH

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ABSTRACT

At high microvascular filtration rates, the lung lymph protein concentration (CL) may be higher than the filtrate protein concentration due to protein washed into the lymph from the lung tissue space. To test that hypothesis, we increased the microvascular filtration rate in 5 anesthetized sheep and determined the relationship between CL and the plasma protein concentration (CP). Then we extrapolated the data to estimate CL at CP = 0. Because the filtrate protein concentration should be zero at CP = 0, we recorded the extrapolated CL as the concentration of tissue protein in the lymph (Ct). Our Ct estimate (0.92±0.38g/dl) was significantly greater than zero (P<0.05). This result is important because tissue protein in lymph may cause errors when investigators use lung lymph to study microvascular permeability. However, our technique to estimate Ct may allow investigators to correct for the tissue protein problem.