

**ANALYSIS OF THORACIC DUCT FLOW WAVES USING FAST
FOURIER TRANSFORM IN SHEEP****S. Iizuka, M. Onizuka, M. Inagaki, S. Ishikawa, K. Mitsui, T. Mitsui**

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ABSTRACT

We measured the lymph flow of the thoracic duct using an ultrasound transit-time flowmeter and then analyzed the obtained flow signals by fast Fourier transform. We found that the wave form included a low frequency component (~0.1 Hz) as well as high frequency components which represented cardiac pulsation and respiratory movement. The low frequency component signified an intrinsic thoracic duct pulsation. When venous outflow pressure was increased, the frequency of the thoracic duct pulsation increased, whereas the frequencies of cardiac pulsation and respiratory movement were unchanged. These findings suggest that thoracic duct pulsation is independent of cardiac pulsation and respiratory movement.