

LYMPHATIC DRAINAGE REDUCES INTESTINAL EDEMA AND FLUID LOSS**R.E. Drake, R.A. Teague, J.C. Gabel**

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ABSTRACT

Lymphatic vessels are important in removing excess fluid from the intestine and transporting the fluid to veins in the neck. However, in some diseases, neck vein pressure is increased and the high pressures may slow lymph flow. This study was to test the hypothesis that lymphatic clearance of fluid from the intestine may be increased by draining the lymphatics. Inflatable cuffs were used to increase neck vein pressure and portal venous pressure in anesthetized sheep. The lymphatic vessel from one segment of small intestine was cannulated and drained. The lymphatic vessel to a control segment of intestine was left intact. After 90 min. we found significantly less fluid in the lumen of the drained vs. control segments (7.4 ± 3.1 (SD) ml vs 11.5 ± 4.7 ml per gram dry tissue, respectively). Also we found significantly less tissue fluid in the drained vs control segments (5.3 ± 0.3 ml/g vs 6.0 ± 0.4 ml/g). The findings support the hypothesis that external diversion of lymph in the presence of an elevated central venous pressure reduces edema formation.