

## **Lymphatic dysfunction in Congenital Heart Disease**

Patients with specific types of congenital heart disease develop long term complications that are thought to be related to abnormal lymphatic function. The clinical manifestations are protein losing enteropathy, plastic bronchitis, chylo-and hydrothorax, ascites and edema.

Using non contrast MR and Near Infrared Fluorescent Imaging techniques we have evaluated the lymphatic morphology and function in health as well as in patients with specific congenital heart defects where the lymphatic function is challenged by elevated central venous pressures.

The activity of the lymphatic vascular propulsion of fluid back to the blood circulation was quantitated in terms of lymphatic vascular contraction rate, velocity and pressure generated in the lymphatic vessels. The patients with congenital heart disease disclosed increased rate of contraction until a certain level of complication after which they seem to be exhausted. Using a heat stress test, the reserve capacity was also found to be diminished.