Scientists better understand how people with Cantu syndrome develop lymphedema

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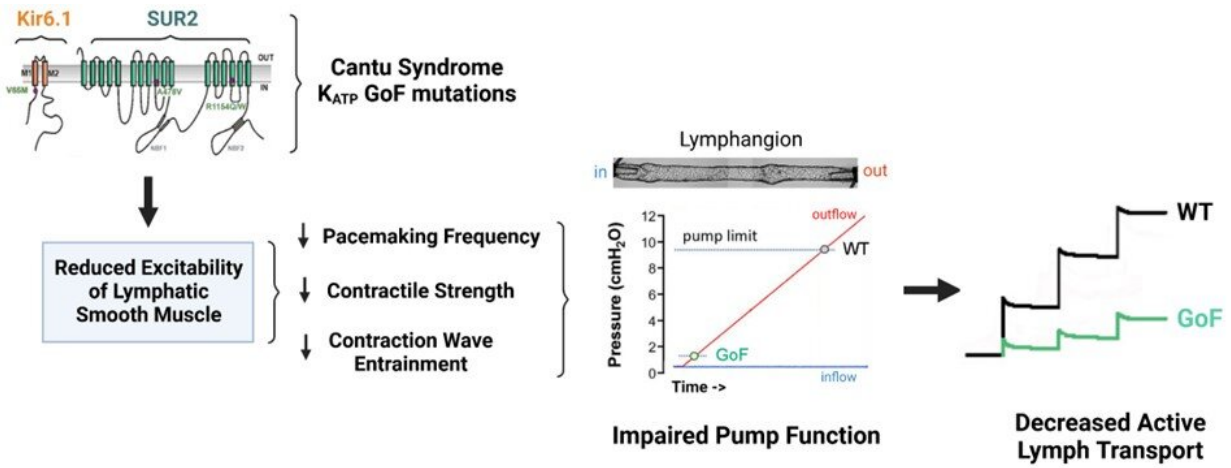

Graphical abstract. Credit: *Function* (2023). DOI: 10.1093/function/zqad017

Ion channels in people with Cantu syndrome produce varying degrees of contractile dysfunction (when muscles and tendons function ineffectively) in the lymphatic system, according to a new research study in the journal *Function*. Researchers from the University of Missouri School of Medicine used a mouse model to replicate several mutations in ion channels to achieve their results.

Cantu syndrome is a rare condition that includes excess hair growth, coarse facial features and heart defects, among other abnormalities. The purpose of this study was to better understand the mechanisms by which

patients with Cantu syndrome develop lymphedema—tissue swelling caused by an accumulation of protein-rich fluid that most commonly affects the arms or legs.

Researchers initially found subtle changes in mice. They later reported dysfunction became more evident when lymphatic vessels were tested under conditions that stimulated pressure loads occurring in the dependent extremities of patients.

"Hopefully our work will guide the development of new pharmacologic treatments or the repurposing of FDA-approved drugs that will selectively improve lymphatic function in people with Cantu syndrome," said Michael J. Davis, Ph.D., a lead author of the study.

More information: Michael J Davis et al, Lymphatic Contractile Dysfunction in Mouse Models of Cantú Syndrome with Katp Channel Gain-Of-Function, *Function* (2023). DOI: 10.1093/function/zqad017

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