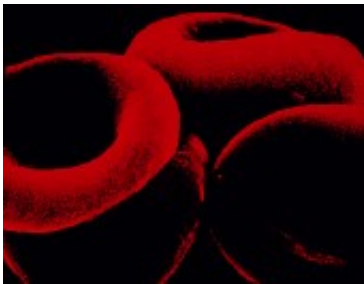


Drug-loaded microbubbles can diagnose, treat thrombosis

May 9 2015



(HealthDay)—Targeted theranostic microbubbles (TT-MB), that consist of a fusion construct combining urokinase, echo-enhancing microbubbles for visualization by ultrasonography, and an activated platelet-specific single-chain antibody for specific targeting to thrombi, can diagnose and treat thrombosis. The findings were presented at the American Heart Association's Arteriosclerosis, Thrombosis and Vascular Biology/Peripheral Vascular Disease 2015 Scientific Sessions, held from May 7 to 9 in San Francisco.

Xiaowei Wang, Ph.D., from the Baker IDI Heart and Diabetes Institute in Melbourne, Australia, and colleagues hypothesized that thrombolytic drug-loaded MBs, which are selectively targeted to activated platelets, will allow high-resolution, real-time imaging of thrombosis. Experiments were conducted in the ferric chloride-induced carotid artery [thrombosis](#)

mouse model.

The researchers found that treatment with TT-MB significantly reduced thrombus size after 45 minutes, while no significant difference was seen in the targeted MB without urokinase (37.09 versus 97.14 mean percent change, normalized to baseline thrombus size; P

"This unique technology holds promise for major progress towards rapid diagnosis and bleeding-free, potent therapy of the vast number of patients suffering from thrombotic diseases," the authors write.

More information: [More Information](#)

Copyright © 2015 [HealthDay](#). All rights reserved.

Citation: Drug-loaded microbubbles can diagnose, treat thrombosis (2015, May 9) retrieved 3 May 2024 from <https://medicalxpress.com/news/2015-05-drug-loaded-microbubbles-thrombosis.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--