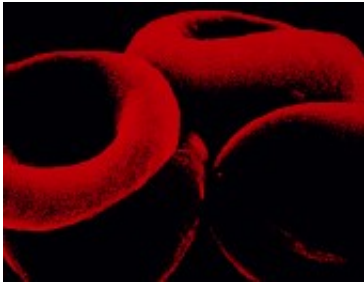


Drug-loaded microbubbles can diagnose, treat thrombosis

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(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](#)

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