New system can assess severity of von Willebrand disease

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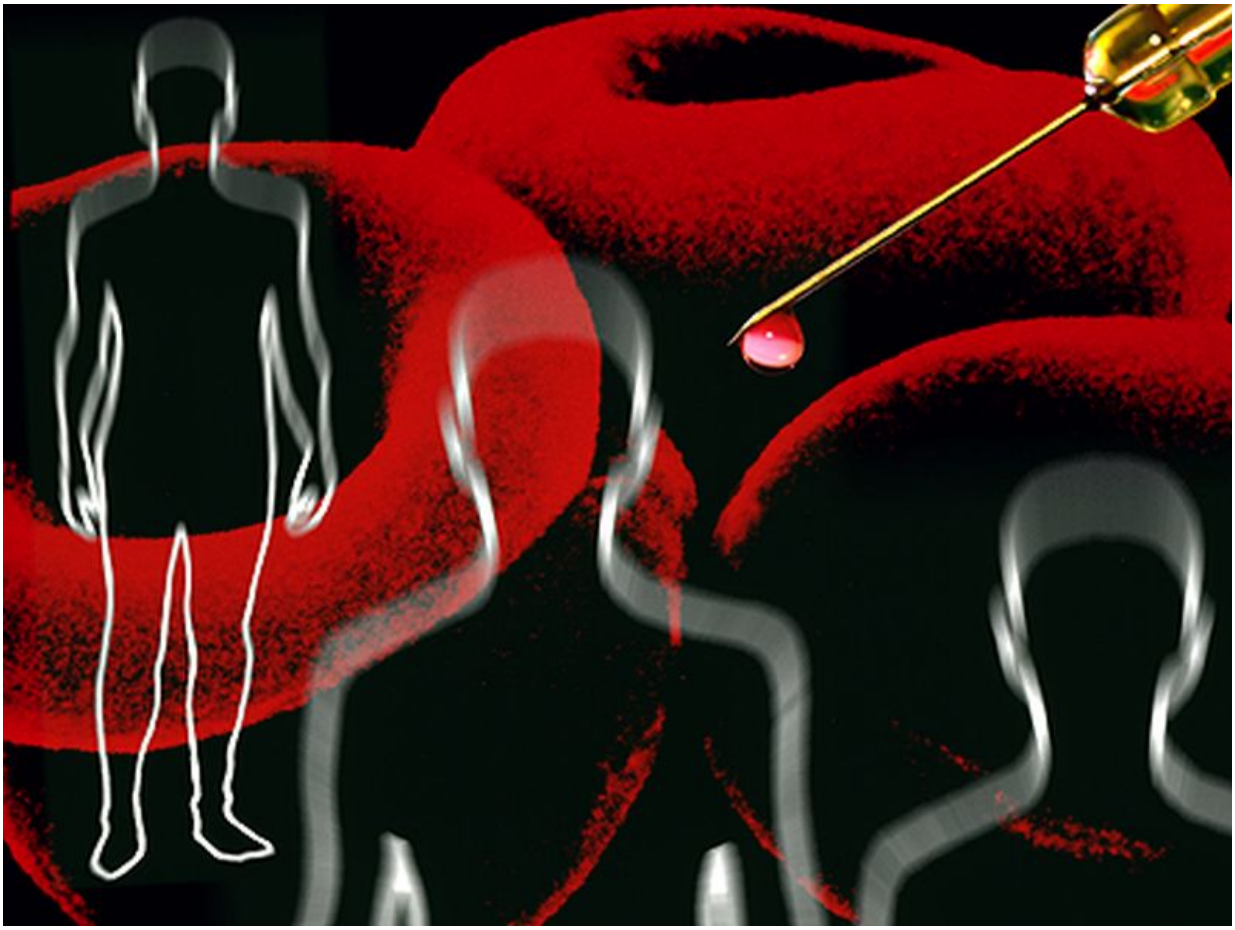

(HealthDay)—A new microchip-flow chamber system (T-TAS) can be

used to discriminate and predict bleeding score (BS) in type 1 von Willebrand disease (VWD), according to a study published online Jan. 27 in the *Journal of Thrombosis and Haemostasis*.

Keiji Nogami, M.D., Ph.D., from the Nara Medical University in Japan, and colleagues examined the potential of T-TAS for assessing physiological hemostasis in VWD. Fifty type 1 VWD patients with whole blood samples were assessed with microchips coated with collagen (PL-chip) or collagen/thromboplastin (AR-chip) to examine platelet thrombus formation (PTF) at high-shear rates or fibrin-rich PTF at low-shear rates. Flow pressure curves were used to calculate the times to increase 10 and 30 kPa (T_{10} and T_{30}) from baseline. A standardized questionnaire was used to determine BS.

The researchers found that irrespective of the flow rate, PL-T_{10} values correlated with BS better than von Willebrand factor-ristocetin cofactor activity, while there was a weak correlation for AR-T_{10} with BS. Lower levels of VWF and higher BS were seen for patients with PL-T_{10} >10 minutes or AR-T_{10} >30 minutes, compared to those with PL-T_{10} ≤10 minutes or AR-T_{10} ≤30 minutes, with the greater difference observed with PL-T_{10}. The best correlation for clinical severity was seen with PL-T_{10} >8 minutes.

"T-TAS could be a useful technique for discriminating and predicting the BS in VWD type 1 patients," the authors write.

One author is employed by the Fujimori Kogyo Co., the manufacturer of T-TAS.

More information: Abstract
Full Text (subscription or payment may be required)