Legends for Supplemental movies

Supplemental movie 1. Buffer perfused over platelet–ULVWF strings on the surface of histamine-stimulated HUVEC. Platelet–ULVWF strings were first formed on the surface of HUVEC by perfusing Tyrode's buffer (pH 7.4) containing 2 mM Ca^{2+}, 1 mM Mg^{2+}, 100 μM histamine, and fixed platelets for 3 min at a shear stress of 2.5 dynes/cm^2. Tyrode's buffer (containing Ca^{2+} and Mg^{2+}) was then perfused for an additional 5 min. The movie was recorded beginning 1 min after buffer perfusion. The strings were stable in buffer under flow.

Supplemental movie 2. NAC removes platelet–ULVWF strings from the surface of histamine-stimulated HUVEC. Platelet–ULVWF strings were first formed on the surface of HUVEC as described in the legend for Supplemental movie 1. NAC (40 mM) in Ca^{2+}, Mg^{2+}-containing Tyrode's buffer was then perfused for 5 min. The movie was recorded beginning 1 min after the initiation of NAC perfusion. NAC caused the stings to stretch before detaching.

Supplemental movie 3: Calcium ionophore-induced platelet thrombi in wild-type mice. Fluorescently labeled platelets isolated from wild-type C57Bl/6 mice were injected into the tail veins of mice used for intravital microscopy. The mice were then anesthetized and the mesentery was externalized. A mesenteric venule of 120 to 150 μm diameter was chosen and treated topically with 10 μl of 10 μM calcium ionophore to induce Weibel-Palade body secretion. No platelet adhesion to the vessel wall was detected before calcium ionophore application. Immediately after applying calcium ionophore, platelets began adhering on the vessel wall. Fluorescence in the vessels, arising either from thrombi or individual platelets attached to the vessel wall, was recorded with a digital camera and analyzed using Slidebook software.

Supplemental movie 4: NAC reduced the size of platelet thrombi induced by calcium ionophore in wild-type mice. Mice for intravital microscopy were prepared as described in supplemental movie 3. NAC (0.4 mg/g) was injected into the tail vein 5–10 min before calcium ionophore stimulation.

Supplemental movie 5: Platelet thrombi induced by calcium ionophore were larger and persisted longer in ADAMTS13$^{-/-}$ mice than those in wild-type mice. ADAMTS13$^{-/-}$ mice for intravital microscopy were prepared as described in supplemental movie 3. Fluorescently labeled platelets were isolated from ADAMTS13$^{-/-}$ mice.

Supplemental movie 6: NAC reduced the size of platelet thrombi induced by calcium ionophore in ADAMTS13$^{-/-}$ mice. ADAMTS13$^{-/-}$ Mice were prepared for intravital microscopy as described in the legends for supplemental movies 3 and 5. NAC (0.4 mg/g) was injected into the tail vein 5–10 min before calcium ionophore stimulation.

Supplemental movies 3–6 were recorded using the same objective. A representative scale bar is shown in Supplemental movie 5.