**YHD & EYHD SUPPRESSES PLATELET ACTIVATION AND THROMBUS FORMATION BY REDUCING THROMBOXANE B2**

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YHD is widely prescribed traditional Chinese medication for treatment of heart disease. Previous reports showed that YHD enhances angiogenesis and reduces left ventricular remodeling. Our study further investigated the effects of both YHD and ethanol-precipitated YHD (EYHD) on platelet activation in vitro and thrombosis in vivo. The data demonstrate that 20 mg/mL of YHD and 2-20 mg/mL of 75% EYHD decrease platelet aggregation induced by adenosine diphosphate (ADP). Collagen-induced platelet aggregation is also significantly suppressed by 20 mg/mL YHD, 20 mg/mL of 50, 50-75, and 75% EYHD, and 2 mg/mL of 50-75 and 75% EYHD. Rats administered with 4 mg/mL 75% EYHD show a marked reduction in collagen-induced platelet aggregation at 2 h post-administration. Meanwhile, YHD and EYHD remarkably prolong the onset of thrombosis and lead to a loose attachment of thrombus to the vascular endothelium, albeit with no key power on their bleeding or clotting times. YHD and EYHD also reduce the level of thromboxane B2 (TXB2). Taken together, YHD and EYHD effectively inhibit thrombosis in vivo due to antiplatelet activity, which may exert beneficial effects on the treatment of heart disease.