題名:Improving Effects of Epigallocatechin-3-Gallate on Hemorheological Abnormalities of Aging Guinea Pigs.

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摘要:BACKGROUND: Epigallocatechin-3-gallate (EGCG) is the most potent antioxidant of all the green tea catechins. The objective of the present study was to find out whether it improved the age-induced hemorheological abnormalities or not. METHODS AND RESULTS: Twenty-four-month-old aging guinea pigs were used to test the effects of EGCG on hemorheological properties. Orally feeding EGCG at 30 mg x kg(-1) x day (-1) for 28 days resulted in a decrease in erythrocyte membrane malondialdehyde, and further improved erythrocyte deformability and blood viscosity at high and middle shear rates. In addition, it also significantly reduced erythrocyte aggregation, and improved blood viscosity at low shear rates and viscoelasticity at oscillatory flow. Consequently, efficiency of blood oxygen transport in aged guinea pigs increased after administration with EGCG. CONCLUSIONS: Orally feeding EGCG 30 mg x kg(-1) x day(-1) for 28 days significantly improves the abnormal hemorheological parameters. These results suggest that EGCG has considerable potential as a substantial component for the development of new drugs or functional foods in improving the age-induced hemorheological abnormalities.