

ウズベキスタンに生息するダニ(*Boophilus calcaratus*)毒液 からの血液凝固阻害物質の分離

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Isolation of anticoagulant from the venom of tick, *Boophilus calcaratus*, from Uzbekistan

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ABSTRACT : *Boophilus calcaratus* is a tick found in Central Asia and a common parasite to domestic animals. Venom from this tick was fractionated by two-step column chromatography, Sephadex G-75, and DEAE-Sephadex A-25. The homogeneity of the anticoagulant was examined by sodium dodecyl sulfate polyacrylamide gel electrophoresis. The purified component is named calcaratin and has a molecular weight of 14,500. The effect of the purified anticoagulant component (calcaratin) on various sites of the blood coagulation cascade scheme was examined and compared with crude venom. The chromogenic substrates S-2238 (H-D-Phe-Pip-Arg-pNA 2HCl) for thrombin and S-2765 (N-alpha-Z-D-Arg-Gly-Arg-pNA 2HCl) for factor Xa were also investigated. Activated partial clotting times were all prolonged, suggesting the anticoagulation nature of the purified component and crude venom. Prolongation of fibrinogen clotting time (FCT) is highly suggestive of the antithrombin property of the purified component and its original venom.

抄録 *Boophilus calcaratus* は、中央アジアに生息し、その地方の家畜に寄生するダニである。このダニの毒液を Sephadex G-75 および DEAE-Sephadex A-25 を用いたカラムクロマトグラフィーで分離し、分子量 14,500 の血液凝固阻害物質を得た。この物質を calcaratin と命名し、血液凝固カスケードの作用点を調べるため、合成基質を用いて第 Xa 因子活性、トロンビン活性を測定した。さらに、カオリン誘導凝固時間(APTT)、フィブリノーゲン凝固時間(FCT)を著しく延長させたことから、この血液凝固阻害物質は抗トロンビン作用を有することが強く示唆された。

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