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THE FIBRINOLYTIC EVALUATION OF *CHRYSANTHEMUM CORONARIUM*

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SUMMARY

In this work, the ethanolic and petroleum ether- diethlyether (2:3) extracts of *Chrysanthemum coronarium* L.(Asteraceae) have been evaporated to dryness and then taken with physiological serum. These samples are then applied to the pool plasma, prepared by the blood samples of young and strong people in the ratio of 1/9. The change in fibrinolytic activity is investigated with Euglobulin Lysis Time (ELT) and Fibrin plate methods.

As a result both of the extracts have been proved to be fibrinolytically active.

Key words : *Chrysanthemum coronarium* fibrinolytic activity.

INTRODUCTION

In this work the aerial parts of *Chrysanthemum coronarium* L.(Asteraceae), which are collected in May, 1996 from Milas-Muğla, Turkey are used. The plant is identified by E.Tuzlacı. A voucher specimen is kept in the Herbarium of the Faculty of Pharmacy, University of Marmara (MARE 4827).

This plant is used as anthelmintic (1) and insectiside (2).

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RESULTS AND DISCUSSION

The combined appraisal of results obtained with the fibrin plate and ELT methods show that the fibrinolytic system is activated significantly by the ethanol and petroleum ether- diethlyether (2:3) extracts of *Chrysanthemum coronarium* when investigated with both of the above methods (Table1).

Table 1: Fibrinolytic activity of *Chrysanthemum coronarium*

Plant	ELT (min)	Fibrin Plate Area (mm^2)
C.coronarium EtOH	80.77 ± 2.74*	66.81 ± 7.10*
C.coronarium Petrol – Et_2O (2:3)	78.47 ± 3.66*	65.83 ± 8.03*
Control (Saline)	121.80 ± 6.52	17.02 ± 2.71

ELT: Euglobulin Lysis Time
Values are mean±SE; n=15 in ELT; n=7 in fibrin plate area; P*<0.001 vs control; student's t-test

EXPERIMENTAL

The air-dried and powdered plant is extracted with ethanol and petroleum ether-diethlyether (2:3). These extracts are gained from 100g of the dried plant material. The ethanolic extract (5.4g) contains herniarin, umbelliferone, scopoletin (3) and the petroleum ether- diethlyether (2:3) extract is gained from (2.5g) of plant material. This contains dihydrocumambrin A and cumambrin A (4).

Extracts were dissolved in saline and the solutions added to plasma in 1/9 ratio. Incubation was carried out at 37°C for 10 min. The fibrinolytic activity was evaluated by using Euglobulin Lysis Time (ELT) according to Coply et.al. (5) and by fibrin plates prepared with human fibrinogen according to Austrup et.al. (6). These were kept at 37C for 24hrs and the lysis areas were measured in mm^2. Saline was used as control.

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