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THE FIBRINOLYTIC EVALUATION OF SOME PLANTS GROWING AROUND ISTANBUL

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ABSTRACT

The effects of *Clematis vitalba* L., *Equisetum ramosissimum* Desf., *Eryngium maritimum* L., *Melissa officinalis* L., *Typha domingensis* Pers. which grow around Istanbul, Türkiye, on the fibrinolytic system of pool plasma have been investigated in this work.

Key words

Clematis vitalba, Equisetum ramosissimum, Eryngium maritimum, Melissa officinalis, Typha domingensis, Euglobilin Lysis Time, fibrinolytic system, fibrin plate.

INTRODUCTION

The inhibitory effect of an enzyme, obtained from potatoes, to the fibrinolytic system, has been shown in in vitro conditions, in this work (1).

The fibrinolytic effect of an extract obtained from *Brassica oleracea* var. *acephala* has been also examined by us previously (2).

Our aim in this work is to see if some plants which grow around Istanbul have an effect on the fibrinolytic system of pool plasma.

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MATERIAL AND METHOD

In this work the ethanolic extracts of *Eryngium maritimum* (Umbelliferae) , *Equisetum ramosissimum* (Equisetaceae) , *Melissa officinalis* (Labiatae) , *Typha domingensis* (Typhaceae) and *Clematis vitalba* (Ranunculaceae) are evaporated to dryness.

The residues are dissolved in physiological serum and these solutions are added to pool plasma prepared in 1 / 9 ratios, which are taken from young and healthy people.These are incubated at 37°C for 10 minutes.Euglobilin Lysis Time (ELT) is examined with the method of Coply, E.A. et. al. on these samples.Then solutions of the precipitates are applied in 30 µl proportions to the fibrin plates, prepared with human fibrinogen by the method of Austrup, T. et. al.These are kept at 37°C for 24 hours and the lysis areas are measured in mm^2.Physiological serum is used as controls.

The specimens of the material are kept in the Herbarium of the Faculty of Pharmacy, University of Marmara (MARE 4062, 4042, 4061, 4052, 4051)

RESULTS

Values obtained by ELT method can be seen in Table 1. As can be seen in this Table, *Eryngium, Typha* and *Clematis* extracts show an insignificant effect on the Euglobilin Lysis Time, whereas *Equisetum* and *Melissa* extracts decrease the Euglobilin Lysis Time significantly.

The results obtained by the fibrin plate method can be seen in Table 2 . Both from Table 2 and Fig. 1 we can see that the fibrinolytic lysis areas of *Eryngium, Typha* and *Clematis* are insignificant but, the *Equisetum* and *Melissa* extracts increase the lysis areas significantly.

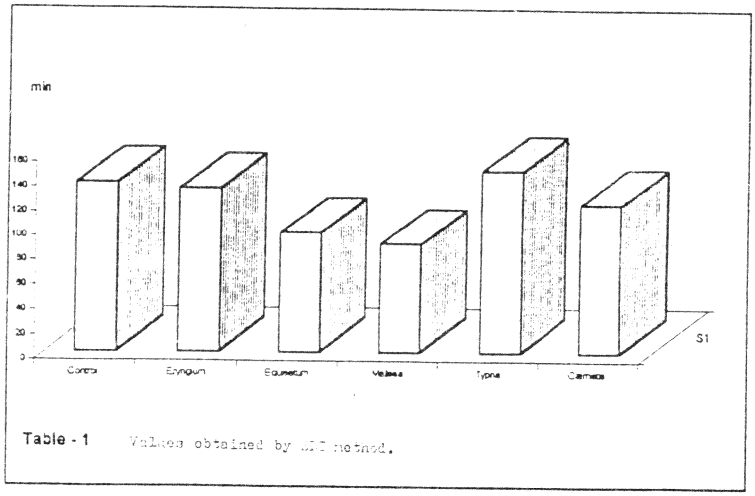

Table - 1 Values obtained by ELT method.

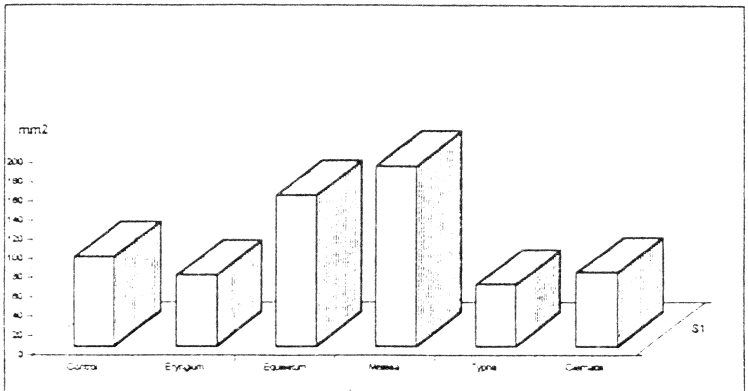

Table - 2 Results obtained by the fibrin plate method.

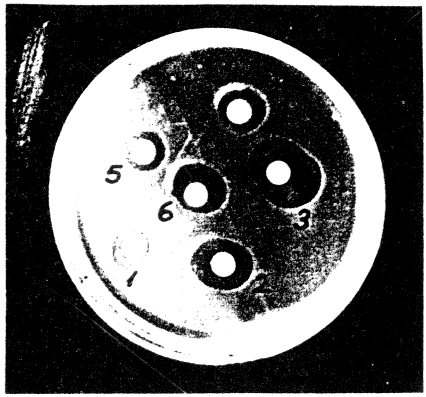

Fig. 1

1. Eryngium maritimum
2. Equisetum ramosissimum
3. Melissa officinalis
4. Typha domingensis
5. Clematis vitalba
6. Control

CONCLUSION

In conclusion, we can say that if the ELT and fibrin plate methods are evaluated together the ethanolic extracts of *Equisetum ramosissimum* and *Melissa officinalis* increase the fibrinolytic system of pool plasma significantly, in in vitro conditions.

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