The Antiangiogenic Effect of Thyme Essential Oil at Its Anticancer Effect

Cetin, Ilayda

Aim:Thymes antimicrobial, antioxidant and anticancer effects are also shown scientifically. In the present study, we aimed to investigate if antiangiogenic effect of Thyme has role at its anticancer effect. Method:The essential oil of thyme has been used in the present study in different concentrations including 34.7 mg/ml, 3.47 mg/ml, 0.347 mg/ml and 0.0347 mg/ml. The fertilized Ross 308 eggs were incubated. On the fifth day of the incubation period, 5 ml of albumen was taken through the eggshell with a syringe and a shell piece of 2–3 cm in diameter was removed from the contrary side of the eggs. Then different concentrations of Thyme essential oil have been applied on CAM.24 hour after treatment, CAM has been evaluated under stereomicroscope and each egg has been scored according to the system which has been invented by Bürgermeister et al. Results:Antiangiogenic score of negative control eggs have been found as “0”.Then 3 different concentration of bevacizumab, which is used as positive control, have been tested (100, 10 and 1 nM).The antiangiogenic score of bevacizumab was 1.58, 1.55 and 1.00 respectively.So 1nM concentration has been used as positive control.The antiangiogenic effect of 3 different concentration of Thyme (34.7 mg/ml, 3.47 mg/ml, 0.347 mg/ml and 0.0347 mg/ml) were 1.65, 1.60, 1.05 and 0.3 respectively.It has been observed that 34.7 mg/ml and 3.47 mg/ml concentration of Thyme showed strong antiangiogenic effect. Conclusion:This is the first study which show that Thyme has antiangiogenic effect. It is likely that this antiangiogenic effect plays very important role at its anticancer effect by inhibiting tumor growth and metastasis. Thyme can also be used in clinical conditions which requiresinhibition of pathological angiogenesis.

Awards Won: