

LETTER TO THE EDITOR

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The use of prophylactic heparin in cancer

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It is known that tendency to coagulation increases in many of cancer patients. The incidence of venous thrombo embolic (VT) events is approximately 10-20%. Besides myeloproliferative disorders, VTs are most commonly seen with gastrointestinal system, lung, prostate, ovarian, and brain tumors. Several mechanisms have been proposed to explain this association; among these are release of procoagulant factors from the tumor, necrosis and hemodynamic disorders as well as decreased fibrinolytic activity and treatments such as surgery and chemotherapy [1]. The role of radiotherapy in the ethio pathogenesis of venous thromboembolism is not fully known. Unlike chemotherapy, data about the epidemiology and clinical features of VT and during radiotherapy are limited. To our current knowledge, 13% of patients receiving radiotherapy have been reported to receive anticoagulant therapy, although there is no evidence about the effects of radiation [2]. In cancer patients, a number of risk factors such as chemotherapy, radiotherapy, surgical treatment, presence of concomitant diseases (previously, deep vein thrombosis, DM, HT, etc.) have been determined in the development of VT. VT development was found to be higher in patients with high risk factors [1-3]. Venous thromboembolism is usually common in cancer patients with metastasis and affects the prognosis negatively. In population-based studies conducted with cases of all cancers, 1-year survival has been reported as 12% in patients with thromboembolic events and 36% in those without such events [1,3].

The main basis in prevention and treatment of acute venous thromboembolic events is anticoagulant therapy. Low-molecular weight heparins are successfully used in treatment and prophylaxis of cancer patients. Heparin has been proven to prevent fatal thromboembolism and inhibit tumoral cell growth, adhesion and metastasis in cancer patients directly or through the inhibition of

coagulant proteases or P-selectin [3-5]. In the FAMOUS (Fragmin Advanced Malignancy Outcome Study) randomized, placebo- controlled, double-blind study, they looked at the effect on survival with DMAH in patients with advanced malignant disease. There was no significant difference in survival between the groups in the 1st, 2nd and third year results. However, in subgroup analysis, it was observed that the patients who lived more than 17 months and who had good prognosis had a mean 24 months in the placebo group and 43 months in the DMHA group (p: 0.03) [3]. Another important study is the CLOT study. In this study, oral anti-coagulant therapy was compared with DMHA treatment for the prevention of thromboembolic event in patients with acute thromboembolic disease. While there was no significant difference between the two groups in the one-year results, it was reported that there was a one-year survival benefit in favor of the DMHA-treated group in the non-distant metastasis group in the subgroup analysis (p: 0.03) [6]. In the animal model studies performed by Borsig, DMHA treatment has been reported to show antimetastatic activity. It was reported that P- and L-selectin were inhibited by blocking, inhibiting angiogenesis and inhibiting extracellular matrix protease heparanase [7]. These results, however, have brought about discussions. Therefore, new studies are needed to better clarify this issue.

As a result, the risk of venous thromboembolism is high in cancer patients, especially during cancer. Heparin has an important role in the treatment of both anticoagulant and cancer. It can be seen that heparin can provide significant contribution to both anticoagulant treatment and cancer prevention, growth and prevention of metastases. However, there is no clarity in the literature. A randomized prospective study or meta-analysis results are needed.

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