

Researching Thrombosis Index in DVT Brings Doctorate

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Deep Vein Thrombosis (DVT) is still a serious health problem especially when there is a development in the direction of pulmonary embolism which can be life-threatening. However, until now there has been no reliable evidence that marks the activation of coagulation which is associated with the detection of an increased risk of DVT. In fact, coagulation activation markers can indicate conditions associated with DVT which could be applied to reduce morbidity and mortality due to DVT.

"How and to what extent the role of F1 + 2, FPA, and the TAT are not clear, especially in Indonesia. Thrombosis Index have not been associated with prethrombotic state in order to predict an increased risk of getting DVT," said dr. Usi Sukorini in her open doctoral exam, Tuesday (8/11), at Faculty of Medicine UGM.

DVT is one of the manifestations of venous thromboembolism (TEV) arising from a particular condition or complications of the underlying disease, which can induce the onset of prethrombotic state. In 2009 it was reported that in Indonesia the asymptomatic and symptomatic TEV incidence on the patients with post-surgical orthopedic without trombofilaksis obtained were respectively 69.2% and 23.1%.

He explained the risk factors associated with the occurrence of DVT is quite diverse, including surgery, trauma, long bed rest, long journey, chemotherapy, obesity, smoking, genetic factors, and

other risk factors.

DVT patients can be asymptomatic and symptomatic, so people need to be aware for it to not develop to a pulmonary embolism. Pulmonary embolism, said dr. Usi, can occur when the thrombus, especially in the inferior extremities, comes off as emboli and follows the blood flow through the vena cava inferior to the heart and then to the pulmonary artery.

"In this condition the patient may experience sudden shortness of breath and eventually died suddenly. This condition is very dangerous, especially for asymptomatic patients," said a faculty member in the Department of Clinical Pathology and Medicine Laboratory, Faculty of Medicine.

This issue encourages dr. Usi to formulate a new formula to describe the in vivo condition that impacts the final product so as to influence the formation of thrombus. In her dissertation, entitled "Risk Factors Prethrombotic State and Index Thrombosis of Deeps Vein Thrombosis ", she determines how much the role of coagulation activation markers of prothrombin fragment 1 + 2 (F1 + 2), fibrinopeptide A (FPA), thrombin-antithrombin (TAT) , as well as the index of thrombosis (F1 + 2) + (FPA) / TM in predicting an increased risk of DVT.

On her research, she suggests that the prothrombin fragment 1 + 2 (F1 + 2) with a cut-off > 0.3 nmol / ml may predict an increased risk of DVT with an odds ratio of 73.8, while fibrinopeptide A (FPA), thrombin-antithrombin (TAT), and index thrombosis (F1 + 2) + (FPA) / TM can also predict the occurrence of DVT with an odds ratio 1.8, 12, and 1:19.

"Examination of prothrombin fragment 1 + 2, fibrinopeptide A, thrombin-antithrombin complex, and index-related thrombosis can be applied to the management of patients in predicting an increased risk of getting deep vein thrombosis," she concluded.

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