

New Concept about Perioperative Asymptomatic or Symptomatic Deep Vein Thrombosis Prophylaxis in Coronary Artery Bypass Graft

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Asymptomatic deep vein thrombosis (DVT) is a common complication that occurs around of coronary artery bypass graft (CABG). It is common cause of morbidity and mortality in this process [1-4].

DVT is seen in 70-80% of patients underwent coronary artery bypass graft. The incidence of DVT is decreased with pharmacologic prophylaxis [1-4]. However, there is no unique and acceptable consensus exists.

The common prophylaxis for this purpose is administering of Low Molecular Weight Heparin (LMWH) and Unfractionated Heparin (UFH) [5-9]. Heparin can affect on coagulation factors and fibrinolytic proteins and restrain them. It can not affect on platelet aggregation in primary hemostasis phase. Aspirin can affect on platelet aggregation and inhibit it [5-9].

Preventing from asymptomatic DVT with heparin alone was reported 60 % to 70% and with aspirin alone was reported 40% to 50% [10,11].

Administration of heparin and aspirin together can be useful to reduce asymptomatic DVT after CABG [12].

Without using prophylactic anticoagulation, the incidence of Venous Thrombo Embolism (VTE) is high after open heart surgery but with using it the incidence of VTE is lower significantly [12-14], however administration of anticoagulants may increase bleeding but it is not significantly.

Low Molecular Weight Heparin is the best choice for DVT prophylaxis after CABG especially in patients with advanced risk factors [15].

Prevention of VTE with antiplatelet agent or anticoagulation drugs was reported in previous studies [16,17]. In Addition, administering of antiplatelet and anticoagulation drug together to decrease the rate of DVT is more effective rather than antiplatelet drug or anticoagulation drug alone [15-17]. For instance, administration of heparin and aspirin together is more effective than heparin or aspirin alone to prevent from DVT [12].

Administration of anticoagulation drug and antiplatelet drug, for example aspirin and heparin, does not increase the surgical bleeding significantly [12]. However, some previous studies found that surgical bleeding increased with using of anticoagulation drug and antiplatelet agent together or with the use of them alone [18].

It sounds that administration of anticoagulation drug and antiplatelet agent together is more useful and efficient than administration of one of them alone. Also it does not increase surgical bleeding significantly. Further studies are necessary to prove administration of anticoagulation drug and antiplatelet agent together for prophylaxis of DVT in CABG.

The present editorial focuses on importance and necessity of administration of anticoagulation drug and antiplatelet drug together as prophylaxis to prevent from DVT in CABG. It is important to

prevent DVT (symptomatic and asymptomatic) in CABG because of its serious complications.

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