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**COPD 2018- A rare complication related with oral anticoagulant use: Diffuse alveolar hemorrhage- Serap Duru, Dıskapı Education and Research Hospital, Turkey**

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Diffuse Alveolar Hemorrhage (DAH) caused by immune and non-immune etiological factors, characterized by diffuse alveolar consolidation often presents with the clinical trial of dyspnea, hemoptysis, anemia, as a result of the disruption of the alveolocapillary membrane of the lung. Oral anticoagulants are the most commonly used drugs in order to prevent thromboembolic complications. Various bleeding complications may occur during treatment with oral anticoagulants but the development of DAH is quite rare. We present four cases, when the patients are over 65 years of age, followed up at our clinic with diffuse alveolar hemorrhage as a rare complication of the uncontrolled use of anticoagulant (Warfarin) therapy. In the thorax CT, patchy ground glass infiltration areas accompanied by scattered alveolar filling defects were seen in the lung. Although normal bronchial systems were observed in the fiberoptic bronchoscopy, hemorrhagic foci were observed on mucosa and transbronchial biopsy was not carried out. In the obtained hemorrhagic lavage fluid, hemosiderin laden macrophages were observed in addition to erythrocytes. Following supportive treatment including oxygen administration, vitamin K replacement and erythrocyte suspension and discontinuation of warfarin, clinical and radiological findings rapidly improved and our cases were discharged uneventfully. Diffuse alveolar hemorrhage is a life threatening complication, which may develop due to many etiologic factors and it is a catastrophic complication of the uncontrolled use of warfarin, a requiring early diagnosis and investigations before respiratory failure develops. In warfarin associated DAH, especially elderly patients that regularly use the drug, they should be warned against the risk of hemorrhage and should be monitored by clinicians.

The rates of D-dimer in patients with 2019 coronaviral disease (COVID-19) were high. Early studies identify high rates of intravascular coagulation (IVC) and venous thromboembolism (IVC), however, there are limited details. In this longitudinal multicenter analysis 400 patients admitted to the hospital COVID-19 (144 seriously diseased) have been most frequently given normal dose prophylactic anticoagulants at the rate and frequency of haestatic and thrombotic complications. The patients with and without complications linked to coagulation and inflammatory parameters have been assessed. Among patients with thrombotic disorder, ESR, CRP, fibrinogen, ferritin and procalcitonin have been higher than in the outside. DIC, thrombocytopenia clinically important and fibrinogen-reduced diseases were rare and associated with severe bleeding. In order to evaluate the possible benefits of increased anticoagulant prophylaxis in COVID-19 patients randomised treatments are appropriate given the reported bleeding rates. In Wuhan, China for the first time, coronavirus 2019 (COVID-19) became worldwide and has a significant effect on population, culture and world economy as the pandemic has been identified in December 2019. Early studies have indicated that elevated circulant D-dimer rates are related to death,1.2 suggesting a distinct coagulation disorder related to COVID-19, while the respiratory compromise is the cardinal feature of the disease. Recent autopsy studies with COVID-19 patients indicate fibrin thrombi presence inside spreading vessels and capillaries and substantial extracellular fibrin deposition have been supporting this hypothesis. Due to current global pandemics, the rate of bleeding and thrombotic manifestation associated with coagulopathy COVID-19 and the clinical usefulness of irregular coagulation testing are critically important to assess the risk of bleeding, thrombosis and disease severity. A prolonged protrombine time (PT) has been associated with lower survival and increased critical attention requirements in addition to D-dimer4,5. According to laboratory findings disseminated intravascular coagulation ( DIC) has been reported to grow in > 70 % of patients who succumb to infection. Some researchers suggested clinical escalation of the anticoagulant doses used for the prophylaxis in COVID-19 patients because of high levels of venous thromboembolism ( VTE) reported in those early studies.7 The latest expert opinion report

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showed that no consensus was reached about whether standard prophylactic or scale-up anticoagulation was optimal to avoid thrombotic events. Notwithstanding the lack of a consistent description of risk from thrombotic disease, or the use of Low Molecular Weight Heparin (LMWH) at intermediate or therapeutic doses or nonfractial heparin infusions in COVID-19 patients with elevated D-dimer l, a number of organizations have recently published guidance papers, both internally and externally. Other remarks argued against a stepping up of anticoagulation empirically. Therefore, the primary purpose of the study was for a large multicenter cohort of critically ill patients with COVID-19 to explain the incidence of bleeding and thrombotic complications. We also examined the connection between inflammation and coagulopathic complications in COVCD-19 in the light of the previously demonstrated associations between coagulation and inflammatory parameters and mortality in COVID-19 patients. We note the weavenly and bleeding and thrombotic complications of 400 COVID-19 patients in this multi-center study. A radiographally verified incidence of 4,6% (7.6% in critically ill patients), which was much lower than the other reported research from China6 or Europe7 and far more compatible with a separate study by the United States, was observed in a population treated with normal doses of prophylactic anticoagulation. We observed a general thrombotic complications rate of 9.5%, including incidents that have not been verified in the context of imaging, but with critically controlled clinical results such as VTE, thrombotic arterial incidents and clinically relevant non-vessel thrombotic complications, such as HVAC thrombosis. In addition , the average bleeding rate reported was 4.8% (7.6% of those with critical illness), with a high bleeding rate of 2.3% (5.6% of those with critical illnesses and 1 fatal bleed).

While occult thromboembolic events in critically ill COVID-19 patients who, due to detectable bleeding levels, are unable to undergo diagnostic imaging, our data indicate that even critically ill COVID- 19 patients should be treated with caution in the empiric intensification of anticoagulation beyond the normal standard of treatment. Our findings indicate that a randomized trial better assesses the possible value of anticoagulation doses above the current standard of care in COVID-19 patients. In addition, COVID-19 was correlated as in hospitalized patients with varying levels of serious illness with similar rates of thrombosis and bleeding. Initial high rates of D-dimers predicted risks of trauma, thrombotics, serious illness , and death. Instead of coagulation parameters, thrombosis was mainly related to inflammable markers over D-dimer. The optimal dose and course of thromboprophylaxis in patients with COVID-19 must be identified through randomized clinical trials.

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