

# **Risk Assessment, Prevention and Treatment of Venous Thromboembolism in Patients with COVID-19: Assessment of Jordanian Physicians Awareness and Perception**

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## **Abstract**

**Background:** Coronavirus disease 2019 (COVID-19) has spread rapidly across the globe since its first occurrence in Wuhan, China. Patients with COVID-19 are also at increased risk of developing venous thromboembolism (VTE). There are no previous studies that evaluated the physician's knowledge and awareness about VTE complications in patients with COVID-19. The main aim of this study is to assess Jordanian physician's awareness about VTE risk among COVID-19 patients and its treatment protocol.

**Methods:** This is a cross-sectional based survey that was conducted in Jordan between the periods from October- December 2020. During the study period, we tried to target a convenience sample of 100 physicians working in various Jordanian hospitals to take part and participate in this study.

**Results:** The mean age of the study population was 34.9 (ranged from 25 to 68 years) and the majority of participants were males (n= 85, 83.3%). Results from this study showed that there was a significant difference between consultants and residents regard to the proportion of patients taking preventive measures for VTE (P-value = 0.005). Consultants were more aware that age >40 years, dehydration and hypotension or shock are risk factors for VTE in COVID-19 patients compared to residents (with p-values of 0.034, 0.005 and 0.021, respectively). Also, consultants were more aware about the use of bivalirudin and rivaroxaban as prophylactic options for COVID-19 patients suffer from thrombocytopenia or heparin induced thrombocytopenia (HIT) compared to residents (P-values <0.05 for both). In addition, consultants showed awareness about the need for executing exercise and drinking water in discharged COVID-19 patients with persistent VTE risk compared to residents (n=25, 100% verses n=65, 84.4% respectively, P-value= 0.035).

**Conclusion:** All physicians knew about the risk factors for VTE in COVID-19 patients. However, the consultants' showed better awareness for some of the risk factors compared to residents. Consultants were more aware about VTE thromboprophylaxis in COVID-19 outpatients and those suffering from thrombocytopenia. We recommend an educational workshop/seminars to be conducted to enhance the physician's knowledge and awareness about VTE thromboprophylaxis and management in COVID-19 patients.