

# The Role of the Nurse in Preventing Thrombotic Complications in COVID-19

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The current COVID-19 pandemic is a global health emergency, with the prevention of infections and complications associated with the infection caused by the SARS-CoV-2 virus being essential.

The disease caused by the coronavirus SARS-CoV-2 (COVID-19), although in most infected patients it presents with mild symptoms, in more severe cases it can progress quickly and develop an acute respiratory distress syndrome, shock, coagulopathy and endothelial dysfunction, which are the main determinants of microvascular involvement, as they produce greater vasoconstriction, organic ischemia, inflammation with associated tissue edema, and a procoagulant state that predisposes to venous and arterial thromboembolic disease (VTE) [1]. Excessive activation of the immune system causes a cytokine storm and damages the microvascular system, activating the coagulation system and inhibiting fibrinolysis [2]. Endothelitis and the hypercoagulable state favor microthrombosis and VTE associated with COVID-19.

With regard to venous thrombotic complications, non-pharmacological thromboprophylaxis is of special importance, with the role of the nurses of the primary care teams being fundamental, both from the approach of close contacts and in the management of patients COVID-19 at the outpatient level.

It is important that all these non-pharmacological measures that are indicated from the first moment and are reinforced in each face-to-face or telephone visit that is carried out in the evolutionary follow-up of the patients that we do together with the primary care teams.

All immobilized patients will benefit from non-pharmacological thromboprophylaxis with compression therapy [3] with elastic stockings, assessing the indication for pharmacological thromboprophylaxis on an individual basis.

It is advisable to promote a series of general non-pharmacological thromboprophylactic measures such as promoting ambulation, reducing prolonged standing and / or sitting and avoiding crossing the legs, changing position at least every half hour, and performing flexion-extension exercises and circular movements of the feet every hour. It is important to avoid dehydration, drinking an appropriate volume of water during isolation at home, with special emphasis on those patients with fever and / or gastrointestinal symptoms (diarrhea, asthenia, etc.) in whom adequate rehydration should be sought without delay [4].

Thrombosis is associated with the infection caused by SARS-CoV-2, with an estimated 25% of cases of venous thromboembolism in patients with severe COVID-19 pneumonia, increasing its

severity and conferring a worse prognosis [5-9]. Our performance as primary care teams can contribute important actions in the management and control of this severe complication.

Primary care is the gateway to the National Health System, being the first link in the healthcare chain. It is an effective filter for healthcare demand and is key to avoiding hospital overload and collapse. But primary care is much more than a filter, since it acts as the backbone on which the health management of our population pivots, promoting self-care and patient autonomy [10].

The role of the primary care team is paramount, where doctors and nurses work hand in hand to avoid the complications of COVID-19. The new way of organizing primary care, which facilitates non-face-to-face telephone consultations and telematic consultations, allows effective clinical evolution monitoring, reinforcing the self-management of the health of each individual and their family.

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