

Letter to the Editor

Sars-cov-2 Vaccination: What's the deal with Thrombosis?

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Letter to the Editor

Cerebral venous sinus thrombosis has led to the administration of the AstraZeneca vaccine being halted in many countries. But what exactly are these thromboses? And was the decision to halt the vaccine too hasty?

Venous thrombosis is an insidious disease. It can also be deadly. Thrombosis is the leading cause of death in the West. The incidence of Venous Thromboembolic Disease (VTE) is 1.8 per 1,000 people. Pregnancy increases this risk to 4 per 1,000, but women are not prohibited from becoming pregnant.

VTE is more common without a vaccine than with a vaccine. The incidence of VTEs reported to date in Europe is 30 cases per 5 million citizens vaccinated with the AstraZeneca vaccine, or almost 1 in 100,000! Similar cases of VTEs with the Pfizer vaccine have also been reported. Vaccinated populations are by definition considered populations at risk of severe COVID-19 and present mainly with comorbidities of the cardiovascular system.

Suppose, for didactic reasons, that vaccination has a direct consequence of thrombosis (note: this position is not only not valid but is completely wrong as the pathogenesis of thrombosis is multifactorial). In this case, we consider that the administration of any vaccine containing the protein spike (AstraZeneca, Pfizer, Moderna, J&J, Russian, Chinese, etc.), causes the vaccinated citizen a classic inflammatory reaction which leads to the trigger of hypercoagulability, which is one of the three necessary conditions for thrombosis. However, if the same citizen, without being vaccinated, becomes infected with the coronavirus, he / she will present with severe COVID-19 with dramatic consequences.

Indeed, a storm of cytokines would lead to explosive hypercoagulability and endothelial cell damage. In this case, called severe COVID-19 the incidence of VTE is 30-50% and the mortality is 20-40%. That is, patients with COVID-19 who have deep vein thrombosis or pulmonary embolism are two to three times more likely to die than those who do not have thrombosis and have the same severity of COVID-19. These are the patients we treat daily in the wards of COVID-19 pathology clinics and in the intensive care units.

The vaccine protects against the severe form of COVID-19 in more than 85% of those vaccinated and clinical trials have shown no deaths. Thrombotic risk is inherent in our lifestyle, our clinical profile and our environment, it is affected by cardiovascular comorbidities, and genetic coagulation factors (Factor V Leiden.).

Getting vaccinated means I am protected from COVID-19. Non-vaccination means exposing patients to the even stronger inflammatory stimulus caused by the virus and thus exposing them to a high risk of serious COVID-19 with dramatic consequences. We need to look clearly and do the right thing: vaccinate the population en masse and quickly, monitor people who have co-morbidities and support them to protect them!

How;

First of all, it is important to remember the importance of regular and good hydration and mobilization after vaccination and to recommend taking paracetamol in case of fever or flu-like syndrome. In addition, in rare patients with a particularly high risk of thrombosis and in the case of more important general or inflammatory signs, short-term anticoagulant prophylaxis may be recommended, as is usually prescribed in the case of prolonged air travel or in case of bed rest due to acute.

The Nordic countries (Norway, Denmark, Finland) have reported cases of VTEs, but the incidence is higher in the general population of Denmark (2.7/1,000) and factor V Leiden genetic polymorphism is more common than in southern countries. With a prevalence ranging between 5% and 10%. This could explain the few cases of venous thrombosis that have been reported in England (37/20,000,000) and Israel (24/5,000,000).

Suspension of vaccination could put medical staff in a difficult position in this relentless fight against time. Fortunately, vaccination was not suspended in Greece.

Why;

Because inhibition of vaccination enhances feelings of distrust of vaccines and suspicion of clinical trials. Suspension of vaccination would result in the withdrawal of citizens' consensus and accession to the mass vaccination strategy and the delay in the fight against SARS-CoV-2 mutations. Suspension of vaccination even for one day will prolong the time.

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