p < 0,05). A Atividade de Protrombina demonstrou maior valor mediano no grupo da enfermaria (91,50; 95% IC 84,50–100 *versus* 83,40; 95% IC 71,90–96,10; p > 0,05). A contagem de plaquetas também apresentou maior valor mediano no grupo da enfermaria (379,5×103; 95% IC 310,25–453 *versus* 193,5×103; 95% IC 193,5–400,25; p < 0,05). A IL6 obteve maiores níveis séricos de mediana no grupo UTI (2,69; 95% IC 1,34–6,65 *versus* 1,17; 95% IC 0,37–3,39; p < 0,05), assim também a IL1 apresentou maior valor de mediana no grupo UTI (359,12; 95% IC 232,1–659,2 *versus* 152,14; 95% IC 120,74–553,55; p < 0,05). No que se refere a predição desses pacientes estarem em leito de UTI ou Enfermaria, as únicas variáveis capazes de predizer o desfecho de acordo com a curva ROC, foram o TAP (Área sob a Curva = 0,732), IL6 (Área sob a Curva = 0,762) e IL1 (Área sob a Curva = 0,752) sendo considerados bons preditores (AUC > 0,700). **Discussão:** A cascata de coagulação é ativada como reposta à infecção, sendo um sistema de defesa do organismo para evitar a propagação de patógenos, como o SARS-CoV-2. Contudo, se há uma ativação de coagulação exacerbada pode ocorrer um quadro de trombose com possíveis depleções de fatores de homeostasia e sangramento secundário. Além disso, a alta expressão de citocinas como a IL1 e IL6 pode resultar em danos em órgãos através da exacerbação da coagulação. **Conclusão:** Diante dos resultados expostos sugere-se que tanto os exames de coagulação como os biomarcadores inflamatórios devem ser considerados simultaneamente na avaliação da gravidade da COVID-19, podendo auxiliar no prognóstico do paciente.

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RELATIONSHIP BETWEEN TFPI GENE POLYMORPHISMS, POST-COVID-19 CONDITION AND D-DIMER LEVELS IN PATIENTS WITH HISTORY OF COVID-19

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Aim: Coronavirus Disease 2019 (COVID-19) is a highly contagious respiratory illness associated with systemic inflammation. Post-COVID-19 condition (PCC) refers to persistence or development of new clinical findings 3-months after COVID-19 infection, lasting for at least 2-months, without another explanation. Given that COVID-19 is associated with hemostatic disturbances, and a thrombophilic state, we have investigated the relationship between Tissue Factor Pathway Inhibitor (TFPI) Polymorphisms (TFPI -33T>C [rs8176592] and -399C>T [rs10153820]), D-dimer levels and the occurrence of PCC. **Methods:** A total of 144 patients with confirmed molecular diagnosis for COVID-19 between 2020–2022 attended at the Hospital Universitário Antônio Pedro were included in this cross-sectional study. This study was approved by the Research Ethics Committee of the Universidade Federal Fluminense (CAAE: 59213722.5.0000.5243). Patients were recruited between July 2022 and July 2023. PCC diagnosis was performed according to the World Health Organization guidelines (2022). D-dimer levels were assessed by automated methods. Whole blood DNA was isolated for genetic polymorphisms analyses. Genotypes for TFPI -33T>C and -399C>T were obtained by allelic discrimination using quantitative polymerase chain reaction with TaqMan® assays. **Results:** The median (interquartile range) age of the patients was 57 (45–65) years. One hundred and four individuals (72.2%) were female. No differences were observed in D-dimer levels between patients according to PCC diagnosis, hospitalization during acute phase, or among genotypes for TFPI -399C>T and -33T>C. No associations were found between genotypes for TFPI -399C>T and PCC diagnosis, hospitalization during acute phase, or with elevated D-dimer levels (> 500 ng/mL) (p > 0.05). However, carriers of TFPI -33CT presented a higher risk for hospitalization (OR = 3.74; 95% CI 1.41–9.97; p = 0.008), while the TFPI -33CC genotype had a protective effect (OR = 0.25: 95% CI 0.07– 0.91; p = 0.035). No association was found between TFPI -33T>C and PCC or elevated D-dimer levels (p > 0.05). **Discussion:** It is important to explore whether genes related to hemostasis such as TFPI, which encodes an anticoagulant protein, may contribute to clinical outcomes in COVID-19 and subsequently for PCC development. TFPI -399C>T and -33T>C polymorphisms are associated with increased gene expression and higher TFPI levels, and lower risk of thromboembolic events. We did not observe associations between these polymorphisms and PCC. However, we demonstrated that homozygous carriers of TFPI -33T>C may have lower risk for hospitalization during the acute phase of COVID-19. **Conclusion:** Our preliminary data has shown that TFPI -399C>T and -33T>C are not associated with the occurrence of PCC. However, homozygosity for TFPI -33T>C may predict a lower risk for hospital admission during COVID-19.

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O USO DE MACHINE LEARNING PARA PREVER SEQUELAS DO SISTEMA VASCULAR PÓS-COVID-19

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Introdução: A pandemia da COVID-19 trouxe novos desafios para a saúde pública. Nesse contexto, o uso de ferramentas de Machine Learning (ML) foram propostas para auxiliar no