v. 2, n. 77, 2022

International Journal of Health Science

MESENTERIC THROMBOSIS AND VACCINATION AGAINST COVID-19: IS THERE A RELATIONSHIP?

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Abstract: The COVID-19 pandemic has caused thousands of people around the world to die in recent years, however, with the advent of vaccination, mortality from the SARS-CoV-2 virus has been drastically reduced. Therefore, since the beginning of vaccination, mainly vaccines using recombinant vector technology, there have been reports of related thromboembolic events. Presenting a case report of a male patient, 63 years old, who developed an acute abdomen 14 days after vaccination with the recombinant type. He had a single history of deep venous thrombosis. Abdominal tomography with report of multiple loops of the middle and distal ileum in the mesogastrium and right iliac fossa showing an edematous appearance, with reduced parietal contrast, associated with diffuse densification of the adjacent mesentery, with a small to moderate amount of free fluid around it. Filling defect compatible with a thrombus extending from the lumen of the right ileocolic venous branches of the superior mesenteric vein, extending to the extra and intrahepatic portal vein. Exploratory laparotomy was performed with identification of ischemia in the small intestine measuring approximately 60cm, with enterectomy and primary anastomosis. He was discharged on the fifth day of postoperative evolution with follow-up with general surgery and hematology. We know that SARS-CoV-2 infection has a high thrombogenic potential, and comparing the risk and benefit of administering vaccination with the decrease in mortality, it is important to maintain vaccine programs, but it is of paramount importance that health services understand and investigate Vaccine-induced thrombotic thrombocytopenia and its possible complications, including surgical ones.

Keywords: Thrombosis, vaccination, acute abdomen.

INTRODUCTION

The COVID-19 pandemic could be controlled through vaccination, drastically reducing the mortality of the SARS-CoV-2 virus; however, we cannot ignore reports of adverse events, including thromboembolic events, especially with the recombinant vector vaccine. From the reports so far, it has been observed that a portion of the patients may start a clinical picture of thrombosis within three weeks after the administration of the vaccine. The pathophysiology for such an event is still poorly explained, but we know that Vaccination-Induced Thrombocytopenia (IVTT) occurs, usually causing thrombosis in infrequent beds such as the brain and mesenteric. Patients with a picture suggestive of thrombosis induced by vaccination usually have positive anti-PF4-heparin antibodies, excessive platelet activation, aggregation and consumption, similar to the picture of heparin-induced thrombocytopenia.

CASE REPORT

A 63-year-old male patient with a personal history of deep venous thrombosis in the right lower limb 20 years ago after orthopedic surgery, which was treated without complications at the time. He was followed up regularly by the angiology service. Upon admission, he denied other comorbidities, allergies, or history of recent hospitalizations. He received recombinant vaccination against COVID-19 and 14 days after its administration he developed an acute abdomen characterized by sudden, diffuse abdominal pain, without irradiation, associated with nausea, vomiting and for more than 6 hours after admission. On physical examination, he had a deeply painful abdomen, mainly in the right iliac fossa, without peritonism. He drew attention in laboratory tests a venous lactate of 20mmol / L and a D-dimer of 1,700 ng / ml.

Subjected to CT scan of the abdomen with contrast, reporting multiple loops of the middle and distal ileum in the mesogastrium and right iliac fossa, showing an edematous appearance, with reduced parietal contrast, associated with diffuse densification of the adjacent mesentery, with a small to moderate amount of free fluid on the around. Filling defect compatible with a thrombus extending from the lumen of the right ileocolic venous branches of the superior mesenteric vein, extending to the extra and intrahepatic portal vein. The patient evolved with hemodynamic instability, being submitted to emergency exploratory laparotomy with identification of ischemia in the small intestine measuring approximately 60 cm. Thrombus was present in the ileal branches up to the right ileolic vein, with no evidence of obstruction of the superior mesenteric vein. Segmental enterectomy and manual latero-lateral isoperistaltic anastomosis were performed in two planes, considering satisfactory intraoperative clinical conditions. Postoperative follow-up in a hospital environment without intercurrences, with good evolution. He was discharged on the fifth postoperative day with oral anticoagulant and follow-up with general surgery and hematology.

DISCUSSION AND CONCLUSION

We know that SARS-CoV-2 infection has a high thrombogenic potential, and comparing the risk and benefit of administering vaccination with the decrease in mortality, it is important to maintain vaccine programs, but it is of paramount importance that health services understand and investigate thrombotic thrombocytopenia induced by vaccination and its possible complications, including surgical ones, factors that contribute to the reduction of morbidity and mortality of patients.

However, despite the undeniable importance of the vaccination schedule against COVID-19, we must discuss greater rationalization of the use of vaccines with obvious thrombogenic potential, especially when we are dealing with patients who are undergoing complementary doses of the vaccine and who already have risk factors for thromboembolic events. The medical community must also be aware of cases of acute abdomen in previously healthy patients who have recently been vaccinated with the recombinant type. Intestinal ischemia often manifests itself in a frustrating way on physical examination and we must have a high index of suspicion so as not to delay the diagnosis and compromise the viability of intestinal loops, factors that significantly increase the morbidity and mortality of affected patients.

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