

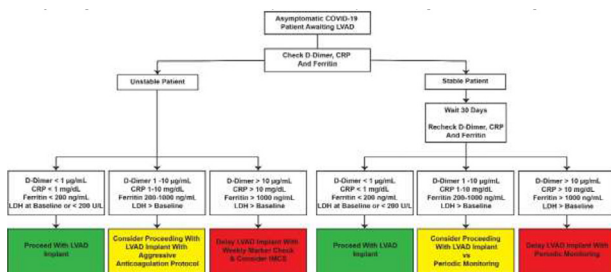


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contrasted with the severity of shock, the decision was made to proceed with implantation. Temporary mechanical support was considered but not thought to mitigate risks of thrombosis rather adding procedural risk with ECMO cannulation and left ventricular unloading. He successfully underwent LVAD implantation as INTERMACS 1. He required high doses of heparin to achieve ACT for cardiopulmonary bypass. On day 2, he developed left-sided weakness with imaging revealing multifocal acute cerebral infarcts. Despite normal LVAD function, the embolic infarcts to multiple organs led to further deterioration and death

Summary: LVAD implantation in COVID patients appears inevitable. Centers must risk stratify this cohort to reduce susceptibility to thrombosis and improve outcomes. We propose an algorithm that triages patients for elective and urgent LVAD implantation based on specific coagulation and inflammatory markers (figure 1) and have successfully implanted an LVAD in a COVID patient using this. We acknowledge this method has not been validated in a large cohort and are unable to recommend anticoagulation protocols. Further research is necessary to address safety of LVAD implantation in COVID patients



1184

Recovery from COVID-19 Pneumonia in a Heart Transplant Recipient

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Introduction: Solid-organ transplant patients have a high risk of severe infection related to Severe Acute Respiratory Syndrome Coronavirus-2. There are limited data on COVID-19 presentation and clinical outcome in a cardiac transplant recipient.

Case Report: A 54-year old woman a heart transplant recipient presented with symptoms of fatigue, excessive sleepiness and cough with phlegm for one week. She did not report any fever or shortness of breath. She had a heart transplant six months prior complicated by antibody-mediated rejection. She was treated with plasmapheresis, intravenous immune globulin, and high dose methylprednisolone. She could not have further scheduled RV biopsies due to the lockdown. She remained on a high dose of immune suppressive medication till her current presentation. Her medication included Prednisolone 20mg daily, Mycophenolate Mofetil (MMF) 1g bid, Tacrolimus 7 mg bid for a target FK level 10-15. On her current presentation to the hospital, she was found to be hypoxic, tachypnic, tachycardic with a BP 130/70. Her chest x-ray showed bilateral infiltrates. She had leukopenia 3.5 and lymphopenia 0.2, CRP 25, ferritin 1106, LDH 632, and IL6 87. She was started empirically on oseltamivir, vancomycin and piperacillin/tazobactam. Her COVID-19 PCR result was positive. Subsequently, she was started on Favipiravir loading of 1600 mg for two doses and a

maintenance dose of 600 mg twice daily for 7 days. The MMF and tacrolimus were discontinued. The prednisone was switched to hydrocortisone 50mg IV q6h. Despite treatment, she had reduced level of consciousness and progressive bilateral lung infiltrates requiring mechanical ventilation. The multidisciplinary team discussed enrolling patients in the convalescent plasma study. The patient’s family was informed and they agreed and consented to proceed with plasma therapy. Two units of compatible ABO plasma therapy was given for two consecutive days. Intravenous dexamethasone was started. She was extubated successfully after ten days. Given her marked clinical improvement, she was started on MMF 1g bid, and tacrolimus adjusted to the target FK level of 5. The patient was discharged home after three weeks of admission.

Summary: This case represents a recent heart transplant recipient who presented with COVID-19 pneumonia. Her treatment involved convalescent plasma transfusion, Favipiravir, dexamethasone, and reduction of immune suppression.

1185

Aortic and Renal Artery Thrombosis as the First Clinical Manifestation of COVID-19 in a Heart Transplant Recipient

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Introduction: The relation between coronavirus 2019 disease (COVID-19) and thrombotic events is well established, and both arterial and venous thrombotic events are described. Although arterial events occur in about 3.6 to 10.5% of critically ill patients, they are usually stroke or acute myocardial infarction. Arterial thrombosis of other sites is rare.

Case Report: We report a case of a 28-year-old male heart transplant recipient admitted into emergency department presenting right flank pain associated with fever, chills, nausea and vomiting for three days. Apart from diabetes mellitus and dyslipidemia, he had no other comorbidity and he was on regular immunosuppression. Physical exam revealed right costovertebral angle tenderness. Blood tests showed C-reactive protein of 317mg/dL, lactate dehydrogenase of 1827U/L, D-dimer of 4126ng/mL, ferritin of 651ng/mL and leukocytosis of 16100/mm³. An abdominal and thoracic computed tomography scan (CT scan) revealed sparse luminal peripheral thrombi in the descending thoracic aorta. One of the thrombi extended to right renal artery ostium and caused subocclusion of the proximal segment of this artery. Right kidney presented multiple renal infarcts. Also ground-glass opacities were found in 25% of pulmonary parenchyma. COVID-19 was suspected and nasopharynx real-time fluorescence polymerase chain reaction result for SARS-CoV-2 was positive. Coagulopathy tests were performed because of atypical presentation and lupus anticoagulant (LAC) was positive. Hydration, antibiotics and anticoagulation with enoxaparin were prescribed. The patient recovered and became asymptomatic. Warfarin was prescribed and patient was discharged after 15 days of hospitalization.

Summary: This case report illustrates the heterogeneity of clinical presentation of COVID-19 and reinforces the existence of a prothrombotic state, even in the outpatient setting. Moreover, it adds information to the recent reports regarding the presence of antiphospholipid antibodies in COVID-19, although their importance in the pathophysiology of thromboembolic events in this setting is still not clear. The implication of these findings in transplant recipients is even less established, and this case report highlights the need for further research.

1186

COVID-19 Infection in a 13-year-old Heart Transplant Recipient in Immediate Post Transplant Period - A Case Report

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