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**Introduction:** Experience regarding course and outcome of Covid-19 infection in heart transplant recipients is limited. Case fatality rate of 25% of covid-19 infection in adult recipients of heart transplant and mild and self-limited disease in young heart transplant patients have been reported in small case series. We describe a case where a 13 year old patient contracted covid-19 infection on 7<sup>th</sup> post-operative day after undergoing heart transplant and was subsequently discharged from hospital uneventfully.

**Case Report:** A 13 year old boy, with dilated cardiomyopathy underwent orthotopic heart transplant surgery. In the immediate pre-operative period, the real-time polymerase chain reaction (RTPCR) of nasopharyngeal swabs of both the recipient and the brain-dead organ donor were negative for severe acute respiratory syndrome coronavirus type 2 (SARS CoV 2). The intraoperative and immediate postoperative periods were uneventful. The recipient got weaned off from mechanical ventilation on the 1<sup>st</sup> postoperative day and O<sub>2</sub> support was weaned off on 4<sup>th</sup> postoperative day. He was put on immunosuppressive regimen consisting of mycophenolate mofetil, tacrolimus and prednisone. On 7<sup>th</sup> postoperative day, he complained of fever, sore throat and dry cough. Nasopharyngeal swab for RTPCR was sent. It reported positive for SARS CoV 2. He was shifted to isolation facility. He maintained more than 94% saturation on pulse oximetry in room air. Immunosuppressive regimen was continued. He was administered 5-day course of remdesivir. Inotropic support was weaned off on 10<sup>th</sup> postoperative day. On serial bedside echocardiography, the allograft function was found to be normal throughout. He was kept on prophylactic antimicrobial, antifungal and anti-cytomegaloviral therapy and on prophylactic dose of low molecular weight heparin. There was initial rise in neutrophil lymphocyte ratio (17), C reactive protein (58 mg/l), ferritin (871 ng/ml), D-dimer (1904 ng/ml), Troponin T (227 pg/ml) levels, which gradually came down to within normal limits. He was discharged on 38<sup>th</sup> postoperative day to a home isolation facility as his RTPCR for SARS CoV 2 was still positive, although he remained completely asymptomatic for the last 21 days.

**Summary:** The course of Covid-19 infection in the immediate post-transplant period of this young heart transplant recipient was largely uneventful.

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#### Venous Thromboembolism as an Initial Manifestation of COVID-19 in a Heart Transplant Patient

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**Introduction:** The disease caused by the coronavirus 2019 (COVID-19) is mainly characterized by symptoms related to the upper respiratory tract associated with fever and constitutional symptoms, progressing in the most severe cases to pneumonia and severe acute respiratory syndrome (SARS). However, due to the increasing number of cases, atypical presentations have been found. Among them, thromboembolic manifestations stand out, since the virus itself seems to predispose to changes in the coagulation system.

**Case Report:** A 62-year-old male patient who underwent cardiac transplantation 6 months ago, secondary to chagasic cardiomyopathy, had pain and edema in his left foot for 1 week. Upon admission, he was eupneic, afebrile, heart rate of 96bpm, blood pressure of 120 × 70mmhg, with edema and erythema on his left foot. Chagas reactivation, cellulite or deep vein thrombosis were the diagnostic hypotheses suggested. Soft tissue

ultrasound and venous doppler of the left lower limb were compatible with deep venous thrombosis and superficial thrombophlebitis. Skin lesion biopsy confirmed Chagas reactivation. Antibiotic therapy with cefazolin, full anticoagulation with enoxaparin and treatment with benzonidazole were introduced. In the second day of hospitalization, patient presented myalgia and dry cough, in addition to an increased C-reactive protein and multiple ground-glass opacities on computed tomography of the chest, suggestive of COVID-19. This finding was corroborated by a positive result of RT-PCR for SARS-COV2. The patient evolved with SARS, requiring progressive use of vasoactive drugs, mechanical ventilation and pronation.

**Summary:** It is currently known that COVID-19 increases the risk of thromboembolic events, especially in hospitalized patients, reaching an incidence of 25%, even in the presence of effective prophylaxis. Several mechanisms have been proposed for this association, but not with robust evidence. Despite these increased cases, there are no reports in the literature of initial presentation with a thromboembolic event in a heart transplant patient, emphasizing the importance of clinical suspicion and appropriate investigation.

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#### Longest Storage Period with Static Hypothermic Preservation in Cardiac Transplantation: Initial Experience in the West Coast

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**Introduction:** Improvement in preservation and transportation conditions has the potential to enhance organ quality at the time of transplant, optimize patient outcomes, and prolong the acceptable maximum allograft ischemic time. Herein, we describe our initial successful experience with the static hypothermic preservation system (Paragonix) for a donor heart. Our storage period and allograft ischemic time are the longest reported in the literature.

**Case Report:** A 68-year-old woman with HF was listed for transplantation. A donor heart was procured from a hospital located 3.5 hours away. The donor allograft was secured and packaged using the SherpaPak™ device (Fig. 1); total storage period was 283 mins. Heart transplantation was performed in standard fashion. AV conduction and normal sinus rhythm were regained after 7 mins of reperfusion. Total ischemic time was 330 mins, including a warm ischemic time of 20 minutes. The recipient CPB time and aortic cross clamp time were 153 and 50 mins, respectively. The patient recovered well and was discharged on postoperative day 10. At three months post-transplant, the patient continues to have excellent graft function without any evidence of rejection.

**Summary:** Historically, Shumway *et al.* initially obtained donor hearts from operating rooms immediately adjacent to a recipient. Over time, donor distance and allograft ischemic times have increased with advances in cardiac preservation. However, long cold ischemic times may induce PGD, cardiac allograft vasculopathy, and contribute to increased length of stay. Maintaining storage temperatures within the narrow range of 4-8° C is optimal for the preservation of high energy phosphate stores and avoids the risk of cold ischemic injury at temperatures below 2°C. By expanding geographic boundaries and total ischemic times, we believe that regulated static hypothermic preservation is a useful addition to a growing armamentarium of devices and strategies to increase access to transplantation.

