



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

Table 2 - Management of Urinary Leak

Conservative	Surgical
Small leak	Large or resistant leak
Foley catheter in place	Distal ureter resection and re-implantation
DJ stent in situ	Necrotic ureter resection and use of native ureter for the anastomosis
Nephrostomy creation	

**Conclusions:** Urinary leak presents the most common urological complication in early post transplantation period and can result in DGF due to mechanical issues, hypovolemia and sepsis. Biochemical analysis of fluid and comparison to serum is essential to differentiate from lymphocele, hematoma or abscess. Imaging is a key point to confirm, diagnose collection and determine severity and location. Organ harvesting should be meticulous to avoid damaging ureter and vessels. Implantation should be tension free. DJ stenting has been promising in reducing incidence of urine leak, therefore, it should be routinely used and removed 6 weeks postoperatively.

No conflict of interest

## POS-757

### COVID-19 INFECTION IN CHILEAN RENAL TRANSPLANTED PATIENTS: INCIDENCE AND CLINICAL OUTCOMES. COLABORATIVE MULTICENTRIC STUDY



Pefaur Penna, J\*<sup>1</sup>, Toro, L<sup>2</sup>, Rosati, P<sup>3</sup>, Badilla, X<sup>4</sup>, Ardiles, L<sup>5</sup>, Rocca, X<sup>6</sup>, Valenzuela, M<sup>7</sup>, Mur, P<sup>8</sup>, Boltansky, A<sup>9</sup>, Diaz, C<sup>10</sup>, Tapia, B<sup>11</sup>, Fernandez, A<sup>12</sup>, Ortiz, M<sup>13</sup>, Elgueta, L<sup>14</sup>, Sanchez, JE<sup>15</sup>

<sup>1</sup>Universidad de Chile, Nephrology, Santiago, Chile, <sup>2</sup>Universidad de Chile, Nefrología, Santiago, Chile, <sup>3</sup>Hospital San Juan de Dios, Nefrología Pediátrica, Santiago, Chile, <sup>4</sup>Facultad de Medicina - Universidad del Desarrollo, Escuela de Medicina, Santiago, Chile, <sup>5</sup>Universidad Austral de Chile, Nefrología, Valdivia, Chile, <sup>6</sup>Hospital Salvador, Nefrología, Santiago, Chile, <sup>7</sup>Hospital Sótero Del Río, Nefrología, Santiago, Chile, <sup>8</sup>Hospital San Juan de Dios, Nefrología, Santiago, Chile, <sup>9</sup>Clínica Davila, Nefrología, Santiago, Chile, <sup>10</sup>Hospital Militar, Nefrología, Santiago, Chile, <sup>11</sup>Hospital G Fricke, Nefrología, Viña del Mar, Chile, <sup>12</sup>Hospital Concepción, Nefrología, Concepción, Chile, <sup>13</sup>Universidad Católica, Nefrología, Santiago, Chile, <sup>14</sup>Hospital Clínico Universidad de Chile, Nefrología, Santiago, Chile, <sup>15</sup>Ministerio de Salud Chile, Coordinadora Nacional de Trasplante, Santiago, Chile

**Introduction:** The 2019 Covid-19 pandemia has been a big challenge for humanity, but especially for kidney transplant patients, given their chronic immunosuppression condition. These patients may have a worse prognosis than the general population. In Chile, more than half a million people have been infected by Covid-19, with a case fatality rate of 2.7%.

Our aim was to know the incidence, epidemiology, clinical behavior and predictive factors of poor outcomes in kidney-transplanted patients infected in Chile, making a comparative analysis with the general population and others replacement therapies patients.

**Methods:** Observational, prospective and multicenter study recording epidemiological, clinical and laboratory variables. Study covered from March 03 to September 30<sup>th</sup> (2020) including 4305 transplanted patients with functioning kidneys. Patients of all ages, diagnosed by rtPCR, serology or imaging, from public and private centers, were included. The infection, case-fatality and mortality rates were analyzed and compared with other replacement therapies patients and general population.

**Results:** We registered 196 cases, 91% diagnosed by rtPCR; 13% was hospital-acquired. The average age was 49 years, 54% male, and transplants were performed a mean of 6.9 years before (0.1 - 38.9). The most common symptoms were fever (52%), cough (50%), myalgia (12%), headache (7%), dyspnea (22%) and gastrointestinal manifestations (21%); 11% asymptomatic patients. The median time from illness onset to diagnosis was 4.5 ± 2.9 days. 52% required hospitalization, mainly in older age, male sex, gastrointestinal symptoms, dyspnea, coronary heart disease and worse baseline renal function at admission. The hospitalization averaged 13 days (1-63), 35% required invasive mechanical ventilation and 34% suffered AKIN (1/3 replacement therapy). Overall mortality was 15.4%, rising to 30% in hospitalized

patients and 50% for those requiring invasive mechanical ventilation. Six patients experienced graft lost. The multivariable analysis revealed as significant predictors of mortality the age (OR 2.92) and residence in lower-income districts (OR 2.35).

Transplants performed between January 1st and August 31<sup>st</sup> 2020 were 109; 13% were Covid-19 infected with a case-fatality rate of 28.6%. The contagion and mortality rates were significantly higher in this group than in those transplanted previously (2.96 and 5.92 times respectively), however the case-fatality was not different.

Compared with the general population, the incidence of infection in transplanted patients was 1.91, case-fatality 5.56 and mortality 10.64 times higher. Compared with patients on hemodialysis, mortality was significantly lower (RR 0.31) although the case-fatality rate did not reach statistical difference.

**Conclusions:** Covid-19-infected kidney transplanted patients have a higher case-fatality rate than the general population, being higher in hospitalized or recently transplanted. Higher mortality of patients residing in lower-income districts confirms the syndemic nature of this disease. Although the mortality and infection rate of transplanted patients with Covid-19 is higher than the general population, it is not significantly lower than the case-fatality rates in other RRT. The high mortality found in recently transplanted patients makes it necessary to analyze transplantation policies, considering the high risk of contagion and poor outcomes.

No conflict of interest

## POS-758

### IMPACT OF REDUCTION OF ARTERIAL STIFFNESS AFTER KIDNEY TRANSPLANT ON RADIAL ARTERY SYSTOLIC-DIASTOLIC PEAK-TO-PEAK TRANSIT TIME



PHILIBERT, E\*<sup>1</sup>, Obeid, H<sup>2</sup>, Paré, M<sup>2</sup>, Côté, N<sup>2</sup>, Fortier, C<sup>1,3</sup>, Goupil, R<sup>4</sup>, Agharazii, M<sup>1</sup>

<sup>1</sup>CHU de Québec Research Center- L'Hôtel-Dieu de Québec Hospital, Division of Nephrology- Faculty of Medicine- Université Laval, Quebec, Canada, <sup>2</sup>CHU de Québec Research Center- L'Hôtel-Dieu de Québec Hospital, Division of Nephrology- Faculty of Medicine- Université Laval, Quebec, Canada, <sup>3</sup>AP-HP- Pharmacology Unit- Hôpital Européen Georges Pompidou-INSERM- U970- Paris Cardiovascular Research Center PARCC., University Paris Descartes- Sorbonne Paris Cité, Paris, France, <sup>4</sup>CHU de Montréal Research Center- Montreal Sacré-Coeur Hospital, Division of Nephrology- Faculty of Medicine- Université de Montréal, Montréal, Canada

**Introduction:** Chronic kidney disease leads to cumulative vascular damage that increases aortic stiffness, which is an independent predictor of cardiovascular events. Analysis of Digital Volume Pulse recordings has been proposed to assess arterial stiffness. It is proposed that the systolic peak timing (T1) represents the forward-travelling pressure from the ventricle, and the peak diastolic component (T2) arises mainly from the reflected wave pressures from the lower parts of the body. Hence, using height of a subject and the transit time, one could calculate a pulse wave velocity and estimate arterial stiffness. In this study, in a cohort of patients with end-stage kidney disease, we aim to examine whether the reduction of arterial stiffness that occurs after kidney transplantation (KTx), translates into improvement of radial artery systolic-diastolic pulse transit time.

**Methods:** In 62 subjects (66% male, mean age: 49±14 years) with end-stage kidney disease, vascular assessments were performed before, 3, 6 and 24 months after kidney transplantation. Carotid-radial and carotid-femoral pulse wave velocities (cr-PWV, cf-PWV) were measured to assess brachial and aortic stiffness, respectively. Radial artery pressure waveforms, recorded by applanation tonometry, were ensemble-averaged to obtain a single waveform and then modelled using two Gaussian functions using our in-house-MATLAB program. Transit time (dT) was then determined as the difference between the first systolic peak (T1) and the early diastolic peak (T2). GEE was used to take into repeated measurements.

**Results:** Three months after KTx with a mean eGFR of 66±17 ml/min/1.73m<sup>2</sup>, there was a significant reduction in cr-PWV (9.49±1.50 to 8.94±1.34 m/s, p=0.001) and cf-PWV (11.56±2.65 to 10.19±1.72 m/s, p<0.001), as well as in central and peripheral blood pressure (p<0.001). Ejection duration significantly decreased (320±29 to 308±23 ms, P=0.006) while the heart rate did not change (71±12 to 74±12, P=0.117). After 3 months, while T1 significantly declined (184 [172-199] to 179 [164-194] ms, P=0.008), there were no significant changes in dT (139 [119-165] to 134 [118-178] ms, P=0.390) nor in T2 (325 [293-361] to 319 [283-357] ms, P=0.119). However, when we adjusted dT for ejection