COVID-19 HITS TWICE IN OUR DIALYSIS PATIENT

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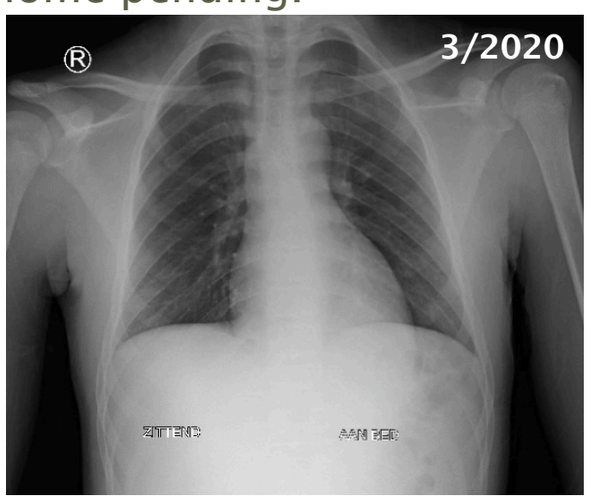
Case history of a male patient born January 2005 in Belgium, in a Togo family.

12/2019 Crash-lander diagnosis of **end-stage renal disease** and **uncontrolled hypertension**.
Extensive work-up including kidney biopsy and genetic screening (panels for nephrotic syndrome, complement diseases, Fabry, mitochondrial diseases) was negative. Mendeliome pending.

Start of peritoneal dialysis.

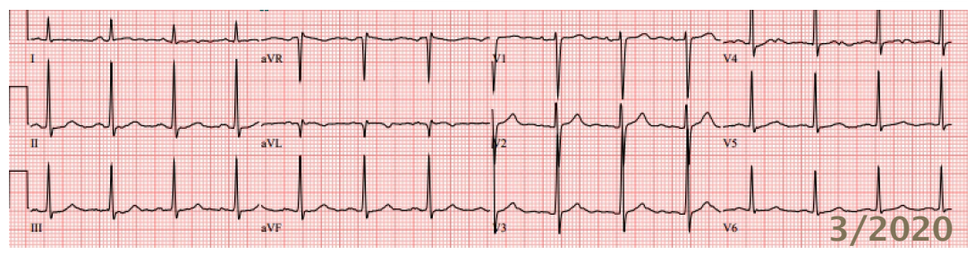


1/2020 ET listing for kidney transplantation.
Pre-transplant work-up did not reveal any other organ dysfunction.

6/3/2020 **Patient called in for kidney transplantation,**
cancelled because of 38.6°C upon arrival in the hospital.
No recent travel history.

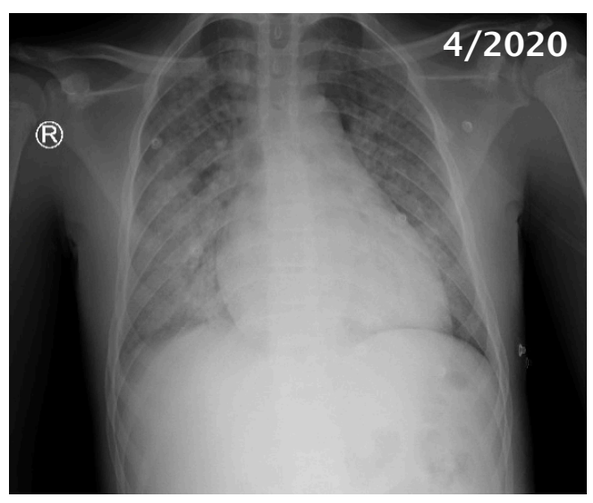
Diagnosis of PCR+ **mild COVID-19** March 6th.
Paucisymptomatic since March 3th.

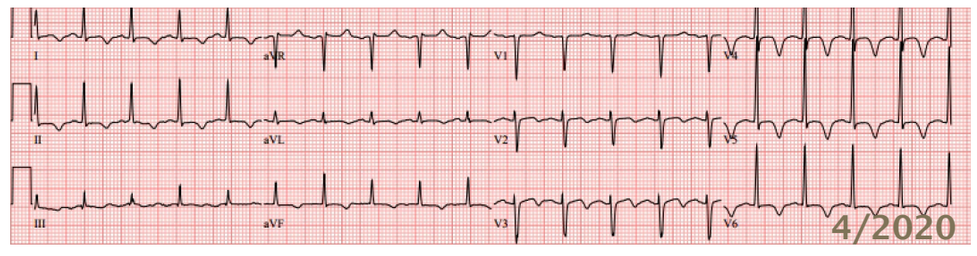
Hospital admission because living conditions at his home did not allow to comply with home isolation measures. Fever disappeared March 9th. Uncomplicated hospital stay until March 16th.



8/4/2020 Hospital admission because of severe heart failure.
Diagnosis of **dilated cardiomyopathy, HFrEF** with LVEF 20%.

- ECG: novel repolarisation abnormalities.
- TTE: dilated cardiomyopathy, LVEF 20%.
- IgG SARS-CoV-2 134 AE/mL (N <15 AE/mL) (posthoc test).
- Endomyocardial biopsy and MRI negative for myocarditis.
- Endomyocardial biopsy shows focal contraction bands in 1/4 biopsies suggestive of focal reperfusion damage.
- PCR SARS-CoV-2 NFswab and myocardial biopsy negative.
- Coronary angiogram normal.
- Dilated cardiomyopathy on MRI.
- No arguments for stress cardiomyopathy.
- Auto-immune bilan and serologic testing negative.
- Metabolic (CBL deficiency) work-up pending.
- Genetic (panel dilated CMP) work-up pending.
- Does not fulfill diagnostic criteria for COVID-19-associated multisystem inflammatory disease[1].





9/2020 Recompensated **dilated cardiomyopathy, HFrEF** with LVEF 20%.
Work-up for combined heart-kidney transplant.

HIT 1

1. **COVID-19 infection witheld patient to receive kidney transplant.**
2. Diagnosis of COVID-19 in a patient called in for kidney transplantation **early March** indicated that **the virus was spreading within the population** and that **it could affect transplant recipients and patients on the waiting list.**

HIT 2

3. First report of **new-onset dilated cardiomyopathy after mild COVID-19** without radiological and histological evidence of direct myocardial injury by SARS-Cov-2 and without a clinical presentation of systemic inflammation. We hypothesize that microvascular dysfunction or microvascular injury related to COVID-19, in a context of uremia, might have contributed to the heart failure. The heart failure now impedes kidney transplantation.

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[1]Jiang L. et al. Lancet Infect Dis 2020