BIBLIOGRAPHIE RECHERCHE COVID 19

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JOURNAL AUTEUR	TITRE	PRINCIPALE QUESTION	POINTS CLES

Bo Diao MedRxiv 4th March 2020	Human Kidney is a Target for Novel Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Infection	Is the kidney a target of SARS Cov2 ? **Retrospective** analysis of eGFR and other clinical parameters from **85 patients**. Kidney tissues from **six patients with postmortem examinations**	- **27.06%** (23/85) patients exhibited **acute renal failure** (ARF). The eldery patients and those with comorbidities such as hypertension and heart failure more developed ARF more frequently (65.22% *vs* 24.19%, $p< 0.001$; 69.57% vs 11.29%, $p< 0.001$, respectively). - H&E staining demonstrated kidney tissues from postmortems have **severe acute tubular necrosis, luminal brush border sloughing and vacuole degeneration, and lymphocyte infiltration**. Dilated capillary vessels were observed in the glomeruli of these 6 cases - Immunohistochemistry showed that **SARS-CoV-2 NP antigen was accumulated in kidney tubules**. - Viral infection not only induces **CD68+ macrophages infiltrated** into tubulointerstitium, but also enhances **complement C5b-9 deposition** on tubules.

Hua Fan medRxiv 9th March 2020	Retrospective Analysis of Clinical Features in 101 Death Cases with COVID-19	Organ failure in death due to SARS-CoV 2	- Liver and **kidney damages** were not significant at the time of admission and at ICU admission, but **a significant deterioration occured 48h before death**. At admission / ICU admission / 48h before death **Serum creatinine** 74.40(64-94.30) /74.95(61.80-101.43) / **173.70**(96.60-350.70)
Qiao Shi medRxiv 4th March 2020	Clinical characteristics of 101 non-surviving hospitalized patients with COVID-19—A single center, retrospective study	Organ failure and clinical characteristics in death from SARS-CoV 2. Comparison between death within 3 days or after 3 days in hospital	- **Retrospective study on 101 patients with comorbidities** including hypertension (58.42%), cardiovascular disease (23.76%), diabetes (21.78%), chronic pulmonary disease (13.86%), cerebrovascular disease (12.87%), chronic kidney disease (10.89%) and malignancy (6.93%) - **acute kidney injury occurred in 23 (22.77%)** of patients - elevated C-reactive protein (123 ± 10 vs 94 ± 9 mg/L), procalcitonin (2.26 *vs* 0.58 ng/ml), hsTnI (1.98 *vs* 0.2 ng/ml), Creatine kinase-MB (6.14 *vs* 2.78 ng/ml), myoglobin (437.7 *vs* 216.8 ug/L) and **BUN (15.2 *vs* 10.08 mmol/L)** were over normal range and **significantly higher in patients died within 3 days of admission**

Bicheng Zhang medRxiv 26th February 2020	Clinical characteristics of 82 death cases with COVID-19	Organ failure in death due to SARS-CoV 2	- Retrospective study of 82 death cases. Median time from initial symptom to death : 15 days (11-20) - **comorbidity (76.8%)**, including hypertension (56.1%), heart disease (20.7%), diabetes (18.3%), cerebrovascular disease (12.2%), and cancer (7.3%). - Respiratory failure was the leading **cause of death** (69.5%), following by sepsis syndrome/MOF (28.0%), cardiac failure (14.6%), hemorrhage (6.1%), and **renal failure (3.7%)**. - respiratory, cardiac, hemorrhage, hepatic, and **renal damage** were found in 100%, 89%, 80.5%, 78.0%, and **31.7% of patients** - Creatinine >133µmol/L ; 11/72 cases (15.3%)
Anti-2019-nCoV Volunteers, Zhen Li et al medRxiv February 12nd, 2020	Caution on Kidney Dysfunctions of 2019-nCoV Patients	Kidney function among patients infected by SARS-CoV 2	63% (32/51) of the patients exhibited proteinuria, by dipstick analysis 9% (11/59) of the patients had increased plasma creatinine (>200 µmol/L in all 3 deceased patients)

Yichun Cheung Kidney Int 16th March, 2020	Kidney disease is associated with in-hospital death of patients with COVID-19	Prevalence and prognosic value of kidney involvement in SARS-CoV 2 infection	Prospective cohort study of 701 patients with COVID-19 admitted in a tertiary teaching hospital **On admission,** 43.9% of patients had proteinuria and 26.7% had hematuria. The prevalence of elevated serum creatinine, and eGFR<60 ml/min/ 1.73m2 were 14.4 and 13.1%, respectively **During the study period,** AKI occurred in 5.1% patients The incidence of **in-hospital death** in the patients with elevated baseline serum creatinine was 33.7%, which was significantly higher than in those with normal baseline serum creatinine (13.2%) After adjustment (for age, sex, disease severity, comorbidities and lymphocyte count), proteinuria, hematuria, elevated baseline serum creatinine, peak serum creatinine > 133μmol/L, and AKI over stage 2 were all associated with in-hospital death

Bo Diao medRxiv https://doi.org/10.1101/2020.03.04.20031120	Human Kidney is a Target for Novel Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Infection	Apart from the respiratory system, it is unclear whether SARS-CoV-2 can also directly infect other tissues such as the kidney or induce acute renal failure.	6 patients autopsies Necrose tubulaire et infiltrat lymphocytaire, sans anomalie glomérulaire ou vasculaire majeure déposition de complément mais uniquement sur les tubules pas d'explication évidente aux protéinuries glomérulaires majeures constatées en clinique Comments: 1. Is there any relationship between renal dysfunction and respiratory function? No statistical study or not shown. 2. Is the primary antibody against viral NP specific? Probably since negative tissue controls have been used and are negative. **The signal in kidney tissues (and lung as positive control) support the presence of the virus within the renal tissue**: but it does not demonstrate definitively that it is locally (in situ) pathogenic→ limitation of the message. 3. Tissue studies from most severe cases leading to death, so with previous severe hypoxemia, shock,… Are the lesions specific or secondary to severe hypoxia and