MO493 COVID-19 AMONG ROMANIAN HAEMODIALYSIS PATIENTS: RISK FACTORS AND OUTCOMES. DATA FROM THE ROMANIAN RENAL REGISTRY

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BACKGROUND AND AIMS: During the COVID-19 pandemic, patients on maintenance heamodialysis (HD) are vulnerable due to their comorbidities, uremia-impaired immunity and limited physical distancing. We aimed to evaluate the risk factors and outcomes of SARS-CoV-2 infection in HD patients in our country.
METHOD: All HD patients enrolled in the national COVID-19 screening programme between 1 September 2020 and 28 February 2021, were included in this retrospective 6-month cohort study, with outcomes ascertained through 28 February 2021.

We excluded patients under 18 years who received a preemptive kidney graft, recovered kidney function or were lost to follow-up during the first 90 days of HD.

Screening for COVID-19 infection was performed by RT-PCR on nasopharyngeal swabs, every 14 days or at staff indication.

SARS-CoV-2 infection severity was defined as mild, moderate, severe and critical as previously described.

We aimed to evaluate the risk factors for COVID-19 as well as for all-causes of death within 90 days of COVID-19.
RESULTS: A total of 15 401 patients on maintenance HD were included. The median age was 64 years, and two-thirds were >60 years old; 57% were male. Glomerular, diabetic kidney and tubulo-interstitial diseases were the main causes of CKD (18, 11 and 10%, respectively).

During the 6-months, 5386 patients (35%) were COVID-19 positive. Compared with negative patients, they had longer vintages, were more often treated by public dialysis providers and had a higher mortality.

Patients in the first 90 days of HD treated by public providers were more prone to SARS-CoV-2 infection in the multivariate logistic regression analysis (Table 1A).

A total of 15% of the COVID-19 patients died; those with the critical SARS-CoV-2 infection had the lowest survival of 8%, followed by those with severe (35%), medium (72%) and asymptomatic (89%) (Fig. 1).

COVID-19 patients >70 years, of male sex, in the first 90 days of HD, with diabetic kidney disease, and from a public unit had higher mortality. Moreover, the same risk factors were retained in the multivariate Cox proportional hazard model (Table 1B).
CONCLUSION: The COVID-19 pandemic has had a substantial effect on mortality in HD patients affected by SARS-CoV-2 in Romania, especially those elderly and diabetic, with severe and critical clinical forms.

MO494 THE PROSPECTIVE ROLES OF URINARY DICKKOPF-3 FOR DETECTING RENAL FUNCTION DETERIORATION AND MONITORING CHRONIC KIDNEY DISEASE PROGRESSION: SYSTEMATIC REVIEW OF COHORT STUDIES

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BACKGROUND AND AIMS: Chronic kidney disease (CKD) is a worldwide health problem whose incremental prevalence. Early detection and proper monitoring of renal dysfunction can decrease morbidity and mortality among CKD patients. Estimated glomerular filtration rate (eGFR) and albuminuria have been used for monitoring CKD progression. Unfortunately, substantial CKD patients' proportion might undergo CKD progression through non-proteinuric pathways. Dickkopf-3 (DKK3), stress-induced renal tubular epithelial-derived glycoprotein, is a key driver of tubulointerstitial fibrosis through the canonical Wnt/β-catenin signaling pathway. This study aims to evaluate the role of DKK3 in detecting and monitoring renal dysfunction and CKD progression.
METHOD: Comprehensive literature searching was performed through the online databases of PubMed, EMBASE, ScienceDirect and The Cochrane Library. This study followed the PRISMA guidelines. The inclusion criteria are all cohort studies that assess the correlation and clinical implications of increased urinary DKK3 with CKD progression. The quality of included studies was accessed by using the Newcastle–Ottawa Scale.
RESULTS: Six cohort studies matched the inclusion criteria. Urinary DKK3-to-creatinine >4000 pg/mg was independently associated with annual eGFR decline among early CKD stages. A multivariate analysis study suggested that 24-h urinary DKK3 was independently associated with the annual Kt/V decline among peritoneal dialysis patients. Increased urinary DKK3 was associated with a significant eGFR decline in 6 months among IgA nephropathy patients. A cohort study suggested that populations with microalbuminuria were significantly susceptible to prevalent cardiovascular diseases, prevalent CKD, and new-onset CKD risks. Urinary DKK3 was associated with significant incremental risks for declining eGFR and proteinuria as well as CKD progression risks in chronic obstructive pulmonary disease (COPD) patients. In a study, involving CKD patients who underwent coronary angiography, the baseline urinary DKK3-to-creatinine ratio was superior to serum cystatin-C and serum and urinary neutrophil gelatinase-associated lipocalin (NGAL), predicting both acute kidney injury (AKI) and persistent renal dysfunction. A cardiac surgery study showed that high urinary DKK3-to-creatinine ratio >471 pg/mg was significantly associated with AKI, persistent renal dysfunction and dialysis dependency.

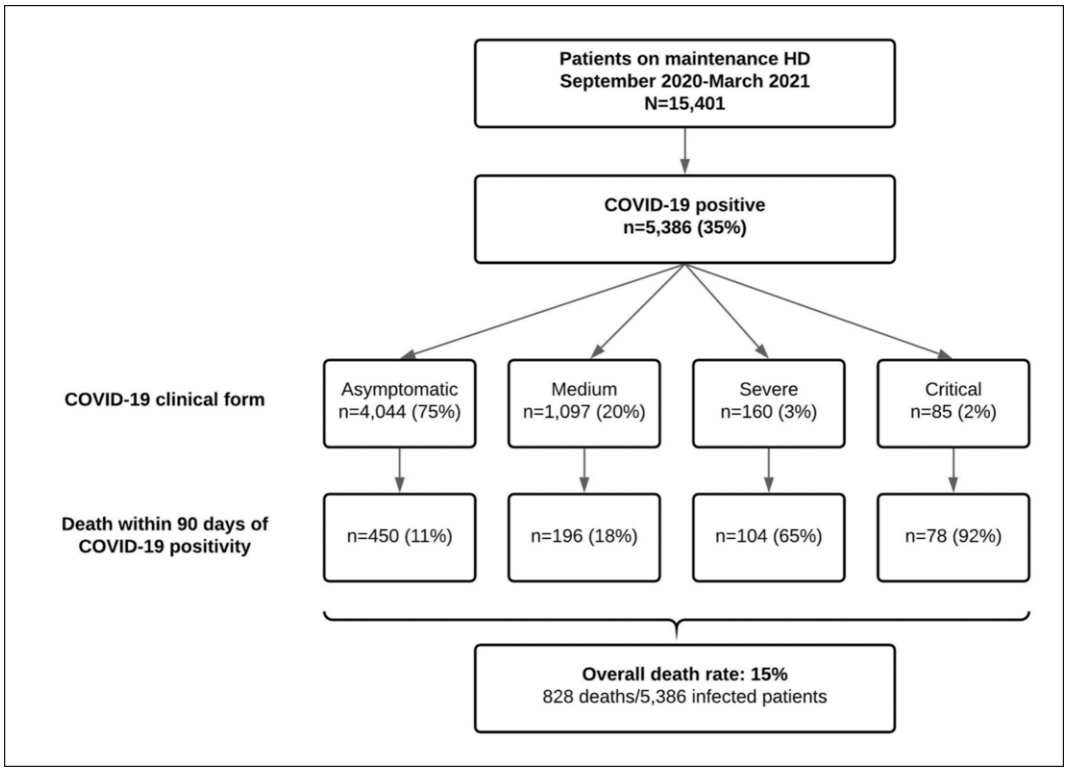

FIGURE 1: Patients' flowchart.