

MO520

SARS-COVID19 INFECTION AT VARIOUS STAGES OF KIDNEY DISEASE: A SINGLE CENTRE EXPERIENCE

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BACKGROUND AND AIMS: Several chronic medical conditions appear to increase the risk of severe COVID-19. Chronic kidney disease (CKD) patients have a high risk of symptomatic infection and severe respiratory symptoms because of chronic inflammation, uremic toxins accumulation, endothelial dysfunction and an impaired immune response. Even though the presence of one or more comorbidities increases the risk of mortality, information of the outcome of COVID-19 in CKD patients is not yet available. The aim of the study is to present the incidence and outcome of COVID-19 in patients referring to our Nephrology Unit considering CKD patients, dialysis patients and kidney transplant recipients.

METHOD: This study is prospective single centre carried out considering patients referring to the Nephrology Unit of St. Orsola University Hospital in Bologna with COVID 19 diagnosis from 15TH March to 30TH May 2020.

RESULTS: Our cohort included 52 patients admitted to our Nephrology Unit because of Sars Cov2 infection confirmed by positive reverse transcriptase polymerase chain reaction on nasopharyngeal swab. The mean age was 67.2 ± 13.8 years (range, 33-88 years). Demographic, clinical and radiological features in Table 1. Forty-eight patients (92.3%) underwent chest TC. The main findings were: several bilateral interstitial pneumonia (39 patients, 81.2%), monolateral peripheral ground-glass opacities (6 patients, 12.5%), no signs of pneumonia (3 patients, 6.2%). Clinical course is highly variable: 18 patients (34.6%) were asymptomatic, 23 patients (44%) had a mild course requiring low flux oxygen therapy and 11 patients (21%) presented severe pneumonia and respiratory distress that requires ventilatory support in intensive care unit. Forty patients (70%) had hydroxychloroquine-azithromycin dual therapy, 3 patients (6%) had antiviral therapy in addition. Sixteen patients (31%) with P/F <150 mmHg were treated with Tocilizumab. Heparin Therapy, to prevent the thromboembolic risk of Sars-Cov2 infection, was administered according to the body weight in forty patients (70%), but not in patients in warfarin therapy (12 patients, 30%). Twenty-six patients (50%) needed antibiotics for bacterial infections combined to the Sars-Cov2 infection. Steroid therapy was added in 40% of cases. The average time of negativization for Sars Cov2, tested with two nasopharyngeal swab specimens made seven days apart, was 31 ± 15 day. Fifty-one patients, 98% of diagnosed cases, required hospitalization with an average stay of 35 ± 26 days. Thirty patients (25%) died. Mean age of non-survivors was 72 ± 11 years while mean age of survivors was 64 ± 11 years. No differences in pre-existing comorbidities were observed between survivors and non survivors; oxygen saturation on presentation was statistically lower in non survivors.

CONCLUSION: CKD is an independent risk factor for COVID-19 associated in-hospital mortality. The mortality rate (25%), much higher than in general population (1.8-8%) may be explained by the older age of patients and the presence of more pathological conditions, especially cardiovascular disease.

MO520 Table 1. Demographic, clinical and radiological features.

| Variables | Total (n=52) | Survivors (n=39) | Nonsurvivors(n=13) |
|--|--------------|------------------|--------------------|
| Age, yr | 67.2± 13.8 | 65± 14 | 72± 12 |
| Woman | 21 (39%) | 17 (44.7%) | 5 (13%) |
| Comorbidity | | | |
| CV disease | 41 (78.8%) | 30 (79%) | 11(84.6%) |
| DM | 22 (42%) | 14 (36.8%) | 8 (61.5%) |
| Cancer | 18 (31%) | 12 (31.6%) | 6(46.1%) |
| BMI>30 | 7 (3%) | 4(10.5%) | 2(15.4%) |
| Dialysis | 31(59.5%) | 24 (63.1) | 6 (46%) |
| Kidney transplantation | 16 (30.7%) | 11 (29%) | 2 (15%) |
| CKD IV-V stage | 4 (7%) | 2 (5.2%) | 1 (7.7%) |
| Onset of Symptoms | | | |
| fever | 29 (79%) | 22(58%) | 7 (13%) |
| cough | 3(6%) | 2 (5.2%) | 1 (7.7%) |
| dyspnea | 8 (15.4%) | 4 (10.5%) | 4 (30.8%) |
| Symptomless | 8 (15.4%) | 6 (15.8%) | 2 (15.4%) |
| Admission HRCT | | | |
| Bilateral peripheral ground-gass opacity | 39(81.2%) | 31 (79.5%) | 8(88.8%) |
| Unilateral opacity | 6 (12.5%) | 5(12.8%) | 1 (11.1) |
| No opacity | 3 (6.2%) | 3 (7.7%) | 0 |
| PaO2/FiO2 ratio | 330 ± 102. | 376 ±93 | 286 ±86 |