



## CASE REPORT OF A COVID SEQUELAE PATIENT DEVELOPING AKI

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### ABSTRACT

The respiratory illness COVID 19 caused by SARS-COV 2 caused a huge health impact on humans. Various case reports mentioned its complications after recovery resulting in lung fibrosis. Here is a case report of a patient with COVID-19 Sequelae who developed AKI.

**Keywords: COVID 19, AKI, SARS-COV2**

### INTRODUCTION

The current pandemic situation caused by COVID -19 due to Severe Acute Respiratory Syndrome Coronavirus (SARS- COV 2) has affected India remarkably. The COVID -19 survivors are in near future experiencing many complications, the most important complication is the lung being fibrosed as COVID- 19 Sequelae which needs hospital admission again. During the course, many COVID-19 patients and the Sequelae patients are also experiencing renal injury

due to various causes [1]. Here is one such case we encountered in our hospital.

### CASE HISTORY

A 53-year-old male was referred to our hospital for his complaints of breathlessness for past 2 days. He also had cough and decreased urine output on presentation following one episode of fever one week back. He is a known case of Type 2 Diabetes mellitus and Hypothyroidism under regular medication; otherwise he did not have any chronic kidney disease or hypertension. He was diagnosed COVID-

19 positive by RT PCR 4 months back and was treated for the same. Following which he was discharged home with Oxygen support.

On the day of admission, he was conscious, oriented and afebrile with temperature of 98°F. His blood pressure was 130/70 mmHg, Heart rate 99 bpm and maintained oxygen saturation of 99% nasal canula delivering oxygen at the rate of 4 litre per minute. His physical examination was unremarkable. On admission the routine workup was done as shown in the table below, and the patient continued to be in oxygen support.

Laboratory investigation revealed high CRP, Procalcitonin, elevated renal function test, electrolyte abnormalities in serum and ABG. Also, he had infection like picture with WBC count 10030. Urine routine showed presence of protein, pus cells and some bacteria but urine and blood culture

showed negative growth also urine showed no significant RBC. The resent RT PCR report of the patient was negative for COVID

Patient respiratory condition started deteriorating gradually, ABG showed severe respiratory acidosis and the saturation was not maintained and hence patient was intubated on the third day of admission following which his kidney function was compromised as evident by Renal function test, Urine myoglobin was not done. CT chest Pulmonary angiogram ruled out pulmonary embolism. He had bilateral diffuse ground glass opacities with septal thickening and scattered soft tissue densities.

Patient was treated symptomatically with fluids, Proton pump inhibitor, bronchodilator, antibiotics and steroids. Patient is planned for Haemodialysis for AKI

Table: 1 Investigation data for the patient

Date	17/1/2021	18/1/2021	19/1/2021	20/1/2021
Glucose (RBS)	201	244	259	234
HBA1C	7%			
Urea	40	78	132	162
Creat	1.0	1.7	2.8	4.7
Na	125	127	127.1	128.1
K	3.49	4.2	4.34	4.32
Cl	83.9	85.5	86.9	90.3
T.Bil	0.4			
D.Bil	0.3			
T. Protein	6.3			
Albumin	2.9			
AST	31			
ALT	22			
ALP	94			
GGT	41			
Hb	8.1			
RBC	2.82			
WBC	10030			
Neutrophils	88.7%			

Lymphocyte	4.9%			
Eosinophils	0.7%			
Platelet	2.19			
PT	12.4			
INR	1.11			
CRP	>19.2			
Procalcitonin	5.17			

## DISCUSSION

The above-mentioned patient is a post COVID 19 Sequelae presenting with AKI. Many case reports states that post COVID patients without any underlying renal disease presents with AKI during the course in hospital [2, 3]. Many causes have been suggested for the AKI in patients with COVID 19. Irrespective of the COVID status ICU patients itself is more prone to develop AKI. The possible reason for COVID patient developing AKI can be due to various reasons like Rhabdomyolysis caused by the virus<sup>3</sup> or due to the antibiotics affecting the kidney or renal compensation that occurs during the respiratory failure encountered during COVID sequelae [4]. This patient infection and Rhabdomyolysis being ruled out the most likely cause is ischemic cause of AKI. Considering this the COVID patient needs to be closely monitored for AKI and treated once diagnosed with AKI to prevent the Complications.

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