

Case report

Subclinical COVID-19 with Transient Ischemic Attack Presentation – A Case Report

Pragna Kranthi¹, Sanath Kumar T², Jyotsna A³, Praveen D^{4*}

Abstract

Background: Recently, there are many covid-19 like asymptomatic cases reported with negative RT-PCR presentation and this condition is classified as sub-clinical covid-19. It primarily affects the respiratory system and cause inflammation triggering blood clot formation leading to complications such as Stroke, Myocardial infarction. Very limited COVID-19 cases with Transient Ischemic Attack were observed. We report a case where the patient presented with Transient Ischemic Attack with underlying subclinical COVID-19. **Case Presentation:** A 70 years old male patient was admitted in medical intensive care unit with chief complaints of weakness and tingling sensation of left upper and lower limbs, slurred speech. The patient described that he had experienced with shortness of breath, cough, fever 10 days before hospitalization. Patient was primarily managed with IV-mannitol, oral-ecospirin and intravenous fluids. Laboratory test was advised which showed elevated levels of inflammatory markers such as ESR, CRP, d-dimer, white blood cells, neutrophils, decreased lymphocytes. CT scan of chest revealed ground glass opacities and CT of brain suggested diffuse cerebral atrophy. But RT-PCR and Rapid antigen test was negative. Based on all these parameters patient was diagnosed with subclinical covid-19 with transient ischemic attack(TIA). Patient was treated with antibiotics, antiviral and supportive treatment was given for 8 days and then discharged from hospital after complete recovery. **Conclusion:** The patient presented with symptoms of transient ischemic attack and later diagnosed with subclinical covid-19 based on laboratory data and the symptoms he had experienced before 10 days of hospitalization. The patient was provided with appropriate treatment and discharged from hospital after complete recovery. Neurological complications and clotting disorders are increasingly observed with covid-19. Hence appropriate care should be taken for monitoring such conditions.

Keywords: subclinical covid-19; transient ischemic attack; d- dimer; COVID-19; Case Report

*Bangladesh Journal of Medical Science, Special Issue on COVID-19, 2021. Page : 162-165
DOI: <https://doi.org/10.3329/bjms.v20i5.55408>*

Introduction

Ever since December 2019 outbreak in China, the SARS-COV-2 infection had led to a global pandemic affecting 124,535,520, including 2,738,876 deaths as on March 25th 2021.^{1,2} COVID-19 had led to several life threatening complications like Guillain Barre Syndrome(GBS), Acute respiratory distress syndrome(ARDS), stroke, sepsis. Although several

treatment strategies have been adopted, there is still a lack of necessary drug therapy to cure the exact condition.³ Most of the COVID-19 patients present with symptoms like cough, fever, dyspnea, loss of smell, loss of taste, myalgia, headache.^{4,5} More recently, many cases presented with a COVID-19 like condition but not in an aggravated form, such subclinical infections although asymptomatic and not fatal, possess the risk of spread of infection.⁶

1. Pragna Kranthi, Department of Pharmacy Practice, St.Peter's Institute of Pharmaceutical Sciences, Hanamkonda, Warangal, Telangana, India.
2. Sanath Kumar T, GMC Suryapet, Kaloji Narayana Rao University of Health Sciences (KNRUHS) Warangal, Telangana, India.
3. Jyotsna A, Department of Biochemistry, Kakatiya Medical College (KMC) Warangal, Telangana, India.
4. Praveen D, Department of Pharmacy Practice, St.Peter's Institute of Pharmaceutical Sciences, Hanamkonda, Warangal, Telangana, India. Email: praveennandan.1993@gmail.com / praveen.d@stpeters.in

Correspondence: Dr. Praveen D, Assistant Professor and Head, Department of Pharmacy Practice, St.Peter's Institute of Pharmaceutical Sciences, Hanamkonda, Warangal, Telangana, India. Email: praveennandan.1993@gmail.com

It is postulated that SARS-COV-2 primarily affects the respiratory system. There are several reports that it could trigger clot formation. Such triggered clots may lead to the incidence of acute stroke.^{7,8} Transient ischemic attack is known as mini stroke, despite resolving within hours may lead to fatal outcomes such as Ischemic stroke if not treated on time. We report a similar case where the patient presented with Transient Ischemic Attack with underlying subclinical COVID-19.

Case Presentation

A 70 years old male patient was admitted in medical intensive care unit with chief complaints of weakness and tingling sensation of left upper and lower limb, slurred speech and the patient was provisionally managed with IV-Mannitol, IV-piracetam, IV-pantoprazole, oral-Ecosprin(aspirin), oral-atorvastatin, IV-optineuron (multivitamins). The Patient is a known case of diabetes and hypertension since 5 years and on regular medication. The patient had also reported that he had shortness of breath, cough, fever 10 days before the present hospitalization. Observing the symptoms of the Patient, laboratory tests such as Rapid antigen test, Reverse Transcription Polymerase Chain Reaction(RT-PCR), Computed Tomography(CT) of brain, High Resolution Computed Tomography(HRCT) of chest, complete blood picture, urine analysis, Renal functional tests, ultrasound of abdomen, lipid profile and Progen test were performed on day 1. Rapid antigen test and

RT-PCR was negative. The abnormalities include increased random blood sugar 201mg/dL(normal -60-160mg/dL). CT scan of brain showed impression of diffuse cerebral atrophy, HRCT of chest had impression of fibroatelectatic lesions in right upper lobes with CORADS (coronaviruses reporting and data system) score of 2(fig1). Increased levels of WBC – 25000cells/cumm(normal range-4000cells/cumm-11000cells/cumm),increased neutrophils – 23000mm³(normal- 2500mm³ -8000mm³), decreased lymphocytes count -1000cmm(normal -1500mm³ to 4000mm³), increased level of ESR 30mm/1st hour were observed. Urine analysis showed increased pus cells, epithelial cells, red blood cells. Renal function test had abnormalities of increased urea 61mg/dL(normal – 10-50mg/dL), increased serum creatinine 2.1mg/dL (normal range 0.5-1.5mg/dL). Lipid profile had increased triglyceride levels of 238mg/dL (normal-upto 150mg/dL). Ultrasound of abdomen showed impression of bilateral grade 1 renal parenchymal changes and a positive progen test. On day one the Temperature- 98.6°F, pulse -96b/min, blood pressure 100/90mmHg, SpO₂ – 97%. Based on physical examination and diagnostic reports the patient was provisionally diagnosed with Transient ischemic attack and lower respiratory tract infection with acute kidney injury

Treatment on day one –IV- piperacillin and tazobactam, IV- doxycycline, oral- nefrosave ,oral-paracetamol, subcutaneous- human actrapid and Intravenous fluids.

Table 1: vitals of the patient during the course of hospital admission.

Vitals	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8
Temperature	98.6° F	103°F	100°F	98.5°F	98.5°F	97.5°F	97.5°F	97°F
Pulse	96/min	127b/min	110b/min	90b/min	85b/min	85b/min	83b/min	80b/min
Blood pressure	100/90 mmHg	150/90 mmHg	150/90 mmHg	140/90 mmHg	130/70 mmHg	130/80 mmHg	130/80 mmHg	130/80 mmHg
SpO ₂	97%	94%	95%	97%	98%	98%	98%	98%

On day 2: the vitals increased as shown in table 1. The patient presented with symptoms of cough and difficulty in breathing. d-dimer, LDH, c-reactive protein tests were performed which showed abnormalities like increased d-dimer-2100ng/mL(normal less than 500ng/mL), crp(c-reactive protein)- greater than 16.0mg/dL(normal -less than 0.5mg/dL). Based on these reports the patient was

diagnosed with subclinical COVID-19 for evaluation, transient ischemic attack with acute kidney injury. Then the antiviral therapy was initiated which include IV-Remedesivir 100mg in 100ml NS, oral-Ivermectin 12mg, oral-oseltamavir 75mg once a day for 5days along with these Neb- duolin and budesort, IV-fervidol, oral- pulmoclear(acebrophylline and acetylcystine) was prescribed for difficulty in

breathing, cough and fever and oral- cilinidipine 10mg to treat increased bp, IV- mannitol was stopped.

On day 3 the vitals increased than normal as shown in table 1 same treatment was continued. Complete blood picture was done which has WBC -10500cells/cumm, neutrophil count is increased 9450mm³, lymphocyte count decreased- 650mm³. Renal function test showed urea 54mg/dL and serum creatinine- 1.7 mg/dL

On day 4 the vitals are reduced as shown in table 1. Difficulty in breathing, cough was reduced. Same treatment was continued. On day 5 vitals returned to normal as shown in table 1. Renal function test showed urea- 48mg/dl, serum creatinine- 1.5mg/dl. Urine culture and sensitivity test reported sterile. On day 6 vitals returned to normal as shown in table 1. On day 7 vitals returned to normal as shown in table 1. On day 8 all vitals were normal. Patient was able to walk, speak and reduced shortness of breath, cough and discharged from the hospital.

Conclusion

The patient presented with transient ischemic attack and when enquired about his overall health status, the patient revealed that he suffered with shortness of breath, cough, fever 10 days before hospitalization. Then the patient was advised for lab tests based on those lab reports it is hypothesized that the patient would have developed COVID-19 initially which could have triggered thrombosis leading to transient ischemic attack and now patient might be in post acute inflammatory condition-2nd illness period in which the laboratory data showed increased WBC, neutrophils, ESR, CRP, d-dimer. decreased lymphocyte count and fibroatelectatic lesions found in HRCT of chest and increased vitals (fever, pulse), decreased saturation but rapid antigen and

RT-PCR was negative. Based on all these parameters patient was diagnosed with the condition as subclinical COVID-19 for evaluation and the patient condition was managed with antibiotics, antivirals, and supportive treatment was given after 8 days patient was fully recovered and discharged from the hospital.

Neurological complications and clotting disorders are increasingly observed with COVID-19. Hence appropriate care should be taken for monitoring such conditions.

Acknowledgments:

The authors are thankful to St Peter's Institute of Pharmaceutical Sciences, Hanamkonda and Rohini Superspeciality hospital, Hanamkonda, Telangana, India for their support and facilities.

Source of fund: (if any). Nil

Conflict of interest: The authors declare that there is no conflicts of interests among them.

Ethical clearance: The study participant (Patient) was informed and a written informed consent for their willingness to publish the data was obtained.

Authors's contribution:

Data gathering and idea owner of this study: Pragna Kranthi, Sanath Kumar T, Jyotsna A, Praveen D

Study design: Pragna Kranthi, Sanath Kumar T, Jyotsna A, Praveen D

Data gathering: Pragna Kranthi, Sanath Kumar T

Writing and submitting manuscript: Pragna Kranthi, Sanath Kumar T, Jyotsna A, Praveen D

Editing and approval of final draft: Sanath Kumar T, Jyotsna A, Praveen D

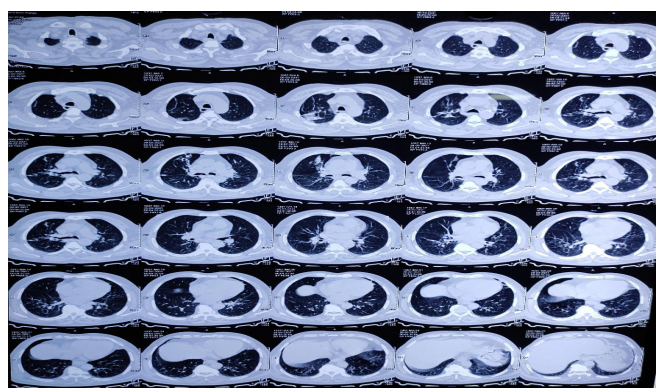


Fig 1: HRCT of Chest

HRCT of chest revealed fibroatelectatic lesions in right upper lobes. CORADS II

References

1. Coronavirus [Internet]. Who.int. 2021 [cited 25 March 2021]. Available from: <https://www.who.int/health-topics/coronavirus/coronavirus>
 2. Sanders, J., Monogue, M., Jodlowski, T. and Cutrell, J., Pharmacologic Treatments for Coronavirus Disease 2019 (COVID-19). *JAMA* 2020;**323**(18):1824-1836
 3. Haque, M. Combating COVID-19: A Coordinated Efforts of Healthcare Providers and Policy Makers with Global Participation Are Needed to Achieve the Desired Goals. *Bangladesh Journal of Medical Science*, 2020;**19**, 01-05. <https://doi.org/10.3329/bjms.v19i0.47610>
 4. Datta S, Talwar A, Lee J. A Proposed Framework and Timeline of the Spectrum of Disease Due to SARS-CoV-2 Infection. *JAMA*. 2020;**324**(22):2251.
 5. Dawson P, Rabold E, Laws R, Connors E, Gharpure R, Yin S *et al*. Loss of Taste and Smell as Distinguishing Symptoms of Coronavirus Disease 2019. *Clinical Infectious Diseases*. 2020;**72**(4):682-685.
 6. Matsuba, I., Hatori, N., Koido, N., Watanabe, Y., Ebara, F, et al; Survey of the current status of subclinical coronavirus disease 2019 (COVID-19). *Journal of Infection and Chemotherapy*, 2020;**26**(12), pp.1294-1300.
 7. Qureshi A, Abd-Allah F, Al-Senani F, Aytac E, Borhani-Haghighi A, Ciccone A et al. Management of acute ischemic stroke in patients with COVID-19 infection: Report of an international panel. *International Journal of Stroke*. 2020;**15**(5):540-554.
 8. Ankaralı, H., Erarslan, N., Pasin, Özge, & Mahmood, A. K. (2020). Modeling and Short-Term Forecasts of Indicators for COVID-19 Outbreak in 25 Countries at the end of March. *Bangladesh Journal of Medical Science*, 19, 6-20. <https://doi.org/10.3329/bjms.v19i0.47611>
-