



A Case Of Mis-A Like Syndrome

¹ Dr Sujith M S, ² Dr Manasa A S Gowda, ³ Dr R Vedavathi, ⁴ Dr S Basanth Kumar

¹ Post Graduate Cum Junior Resident, ² Assistant Professor, ^{3,4} Professor

Department Of General Medicine , Kempegowda Institute Of Medical Sciences And Research Centre ,
Bangalore 560004

***Corresponding Author:**

Dr Manasa A S Gowda

Department Of General Medicine , Kempegowda Institute Of Medical Sciences And Research Centre ,
Bangalore 560004.

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Abstract

Multisystem Inflammatory Syndrome in Adults is a serious hyperinflammatory condition that presents after COVID-19 infection with predominantly extrapulmonary multiorgan dysfunction. The review of literature revealed only few reported cases of MIS-A with different clinical presentation. We report here a case with features of MIS-A in a female who presented with gastrointestinal symptoms.

Keywords: Nil

Introduction:

Till February 2022 there have been more than 4302575645 reported cases of COVID 19. MIS-A is one of the important complication following infection. According to CDC¹, MIS-A is defined by clinical criteria, laboratory evidence of COVID 19 infection and raised inflammatory markers.

Case Report:

A 45 year old female presented with fever, swelling in both side of neck, pain abdomen and loose stools since 10 days. fever was insidious onset gradually progressive, intermittent type, High grade associated with chills. patient also noticed swelling in both side of neck initially right side followed by left side which progressed in size and associated with pain. pain abdomen was dull aching type, all over abdomen associated with 4 to 5 episodes per day of nonprojectile vomiting containing food particles and 4 to 5 episodes of loose stools semisolid to watery in consistency. patient is a known case of cervical squamous cell carcinoma since 4 years, stage 3b, received chemoradiotherapy and brachy therapy for

the same. patient is a known case of hepatitis B since 2 years, Atrial septal defect status post device closure. On examination patient had a pulse rate of 130 beats per minute, temperature 102 F, systolic blood pressure of 80mm of hg, room air oxygen level of 95%, Respiratory rate of 22 cycles per minute and Bilateral lymph node enlargement at level 2, level 3 and level 4 largest measured approximately 1.5 cm. patient had multiple maculopapular rashes all over body and conjunctival congestion. Systemic examination revealed diffuse tenderness all over abdomen, splenomegaly 5cm below left costal margin, normal breath sounds heard over all lung field areas, normal cardiac examination and central nervous system examination.

On admission

ECG-sinus tachycardia

	DAY 1	DAY 2	DAY 4	DAY 10
Hemoglobin	9.8		9.2	
PCV	28.7		27.2	
Total leucocyte Count	4080	4220	4710	
Differential count	N 92 L 07 M 01 E 00 B 00	N 74 L 25 M 01	N 57 L 41 M 01	
Platelet count	83000	53000	1,50,000	
ESR	77			
Peripheral smear	Normocytic normochromic anemia with relative neutrophilia with thrombocytopenia			
Blood Urea	64	70	57	
serum creatinine	1.6	1.5	0.9	
Sodium	133	136		
Potassium	4.8	4.3		
Chloride	87	102		
HBA1C	6.3%			
Urine Routine	Protein -Traces Pus cells -6 to 7 cells Epithelial cells-2 to 4		Protein - Traces Pus cells -0 to 1 cells Epithelial cells-0 to 1.	
CRP (mg/dl)		36.59	6.23	
D DIMER		>20	>20	7.66
Procalcitonin	Negative			

COVID 19 RT-PCR	Negative
HIV	Negative
VDRL	Negative
Hepatitis B surface Antigen	POSITIVE
Dengue ELIZA	Negative
MPQBC	Negative
BLOOD Culture sensitivity	No growth
Urine culture sensitivity	No growth
Stool routine ,culture and sensitivity stool hanging drop	No growth
2D ECHO	POST ASD device closure status ,patch INTACT,NO residual shunt lesion ,Mild Mitral regurgitation ,normal Left ventricular systolic function EF 55%,PASP 42mm ,No regional wall motion abnormality.
CARDIAC ENZYMES	Negative
Thyroid profile	Normal
Fundoscopy	Normal
FNAC report cervical lymph nodes	Reactive lymphadenitis
KOH nasal swab	Negative
Ultrasonogram neck	Bilateral cervical lymphadenitis
Ultrasonogram Abdomen and pelvis	Moderate splenomegaly and periportal lymphadenopathy.
Whole body PET CT	ground glass opacities in both the lung fields ,CORAD 4,Pulmonary arterial hypertension ,cardiomegaly and mild splenomegaly (figure 1)

Neutrophil ,Lymphocytes ,Monocytes ,Eosinophils ,Basophils

Patient was initially tried to resuscitate with IV fluids, then started on ionotrope

and started on broad spectrum antibiotics ,capsule Doxycycline and low molecular weight heparin

In view of current pandemic MISC-A was suspected and patient was started on steroids i.e. injection Dexamethasone 6mg iv OD,

Patient blood pressure improved after starting steroids and ionotrope was tapered , her platelet count also improved and inflammatory markers reduced

Patient was asymptomatic from day 6 and was discharged on day 10 with newer oral anticoagulant

Discussion:

This is a case report describing a patient with multisystem inflammatory syndrome associated with COVID 19 pneumonia in a female.

In the case presented, the patient with gastrointestinal complaints and rashes with no respiratory symptoms presented with shock requiring vasopressor to maintain hemodynamic stability. Along with thrombocytopenia, inflammatory markers were elevated and whole body PET CT was done to look for metastasis from Carcinoma cervix and also to rule out COVID 19 pneumonia, which showed high level of suspicion for pulmonary involvement by COVID-19 (CORADS 4). patient was diagnosed as MIS-A and started on steroids.

Even in Severe COVID 19 infection, hyperinflammatory response and severe extrapulmonary organ dysfunction have been described, but these conditions are usually accompanied by respiratory failure (2). In contrast, the patients with MIS-A will have minimal respiratory symptoms, hypoxemia, or radiographic abnormalities in accordance with the working case definition, which is meant to differentiate MIS-A from severe COVID-19.

Currently, the pathophysiology of MIS in both children and adults is unknown. Several mechanisms

have been proposed, most accepted mechanism for extrapulmonary COVID 19 Virus mediated endothelial damage(2). As the presentation with MIS can occur immediately or many days after covid 19 infection, it is unclear if it's an acute manifestation of infection or sequela following infection.

In a study, Case Series of Multisystem Inflammatory Syndrome in Adults Associated with SARS-CoV-2 Infection — United Kingdom and United States, March–August 2020(3) after analysis of 27 patients concluded that the interval between infection and development of MIS-A is unclear. 24 of the 27 patients survived after receiving acute intervention in health care settings.

Several interventions have been tried for management of MIS-A, such as IV immunoglobulins, steroids, IL-6 inhibitors, monoclonal antibodies(4), above presented case improved with steroids.

Unfortunately, covid 19 antibody test could not be done which would have provided the additional aid in diagnosis of MIS-A. but testing has a minimal prognostic role due to various limiting factors⁷

Other differential diagnosis, that need to be considered when a patient presents with MIS-A symptoms are septic shock, Acute coronary syndrome, Cardiomyopathy, Hemolytic uremic syndrome, Haemophagocytic lymphohistiocytosis⁶

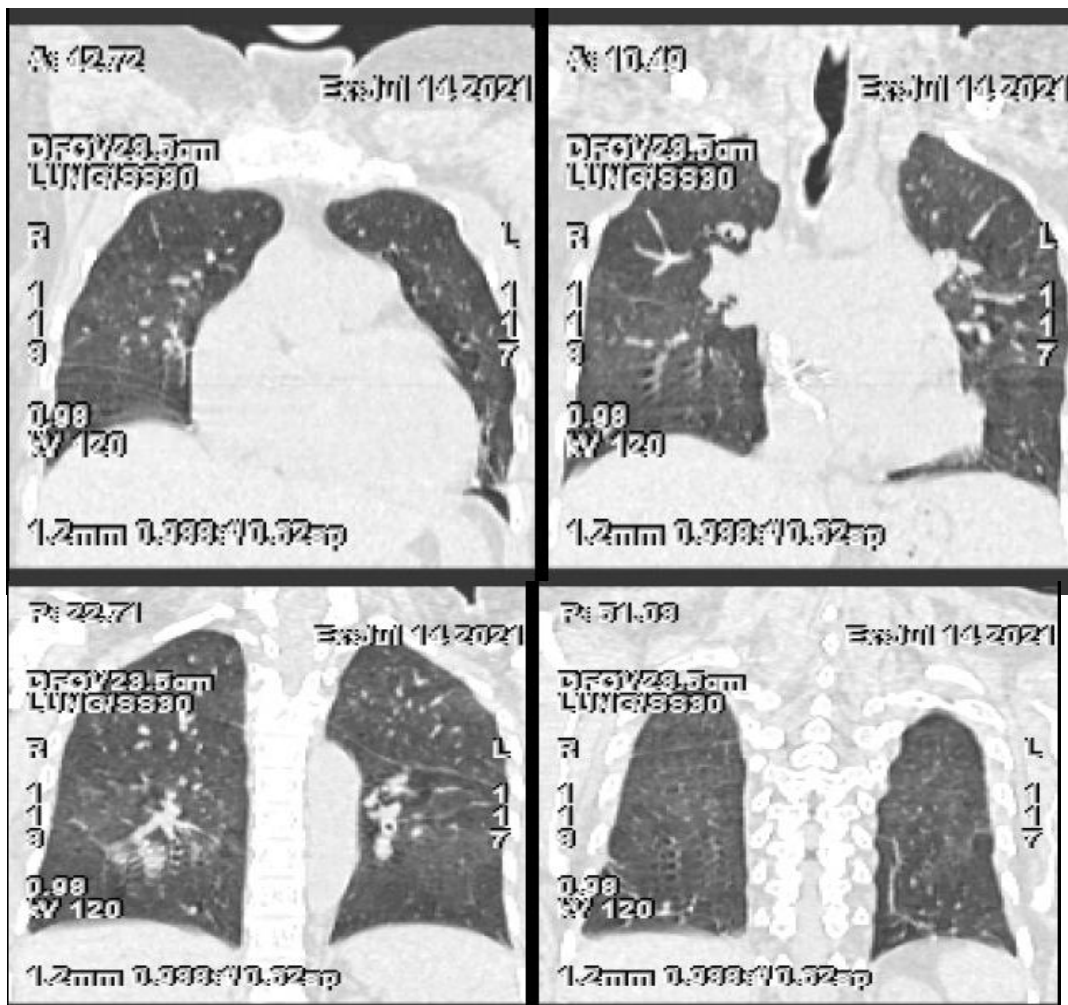


Figure 1

Conclusion:

Though RTPCR and demonstration of Covid 19 antibody is required for the diagnosis of MIS-A, the case presented had only CT features of covid 19

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pneumonia with no respiratory complaints thus aiding in diagnosis of MIS-A like syndrome. This reflects the idea of adding CT features of covid 19 to the definition of MIS-A.

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