A Prospective Study of Variations in Clinical Presentation of Covid 19 Patients at Esic Mch Hyderabad

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Abstract:
Background: COVID 19 is a deadly pandemic affecting the world during 2020. This prospective study was done to study the variations in clinical presentation in the admitted patients with COVID-19 at ESIC MCH. Methods: This prospective observational study was done from AUGUST 2020 to October 2020. All patients both male and female admitted to covid positive ward at ESIC hospital during this period were studied. Patients below 12 years and pregnant women were excluded from the study. The study was carried out in all patients fulfilling the inclusion and exclusion criteria. Results: A total of 200 patients 80 females and 120 males presented during the study period. Most of the patients presented with dyspnea 140 [70%], fever 120 [60%], sore throat 100 [50%], cough 100 [50%], rhinitis 50 [25%], myalgia 40 [20%], diarrhea 20 [10%], anosmia 20 [10%], dysgeusia 20 [10%], nausea 15 [7.5%]. Conclusions: It was observed from the study that most of the patients had fever as the major symptom. dyspnea and cough symptoms followed in many patients. Some patients went into severe respiratory distress; it was observed that patients recovered from the symptoms after symptomatic treatment but persisted with weakened immune system, respiratory disturbances rekindling the long term sequelae this deadly pandemic could lead to.....

Keywords: Covid 19, Pandemic, Anosmia, Dysguesia, Rhinitis, Ards, Immune System.

INTRODUCTION
A case of pneumonia of unknown origin was reported in Hubei Province, China (Huang, C. et al 2020) in December 2019. A novel enveloped betacoronavirus (Lu, R. et al 2020) was the causative pathogen isolated from human airway epithelial cells now known as Severe acute respiratory syndrome corona virus-2. The disease was named COVID-19. It is the seventh member of the family of coronaviridae to infect humans (Zhu, N. et al 2020). The World Health Organization (WHO) declared it as a pandemic on 11th March, 2020 (Huang, C. et al 2020; https://www.who.int; & Wang, D. et al 2020) due to its widespread mortality and morbidity.

The first case in Telangana was detected in the first week of March in a person with travel history abroad. Since then cases have been rising steadily in the region at a brisk pace. In continuation of the services to the covid patients ESIC MCH started admitting patients with covid symptoms and treating them.

METHODS
The present Prospective observation study was done in Department of general medicine in ESIC MCH Hyderabad from August 2020 to September 2020. A total of 200 cases of covid 19 infection were studied during the period based on inclusion and exclusion criteria. All patients were done routine investigations like CBP, Chest x-ray, platelet count, serum electrolytes, liver function tests, renal function tests. Special investigations like serum ferritin, LDH, D-DIMER were done. Based on the findings on x-ray and patients spo2 patients were advised CT-SCAN. Patients admitted were treated conservatively with antibiotics, antipyretics, multivitamins. based on CT SCAN findings patients were graded as per CORADS score and administered Remdesivir and Plasma therapy as the need may be.

Inclusion criteria:- 1.all patients with RTPCR test positive.
Exclusion criteria:- 1. patients aged less than 12yrs 2. pregnant women 3. patients with previous lung ailments 4. patients with previous coagulation abnormalities.
The statistical software SPASS was used to analyse the data and Microsoft word and excel have been used to generate graphs, figure etc.

**RESULTS**

Of all the patients 120[60%] were males and 80[40%] were females with male preponderence. The patients admitted were more in the age group 30-40 around 50[25%], followed by age group 40-50 around 38[19%]. Based on symptomatology patients presented with fever 140[70%], cough 120[60%], sob and sore throat 50%. Out of these patients admitted with covid, comorbidities were more in age groups 50-60 about 25[9%], in 60-70 age groups about 18[8.2%]. Out of the patients admitted with covid 19 mortality was more in older age groups presenting with comorbidities.

![Figure 1. Gender Distribution](image1)

In Figure 1 there is a depiction of male preponderance with males 120 vs females 80 in the ratio M:F [3:2 ]

![Figure 2. Age Group](image2)
In Figure 2 the patients with COVID-19 were more in the age group 30-40 yrs followed by patients in the age group below 40-50 yrs.

![Figure 3. Symptoms](image)

In Figure 3 the patients with fever were more compared to other symptoms.

![Figure 4. Clinical aetiology pattern](image)

In this Figure the patients with comorbidities were more in age group 50-60 yrs.
In Figure 5 the mortality of patients is depicted.

**DISCUSSION**

Patients were initially divided into wards depending on presence or absence of symptoms. Every COVID-19 positive patient was treated with HCQS and azithromycin, barring those who had any contraindications or side effects. Both the drugs were tolerated well by maximum patients. Symptomatic support like antihistamines, cough syrup, oxygen support and intravenous antibiotics was also instituted. Nebulization and use of MDI/high flow nasal oxygen was preferred. Patients were asked in detail of their travel history, ailments and thoroughly investigated.

Respiratory droplets and direct contact (Lei, H. et al 2018; Otter, J. A. et al 2016; & Zumla, A. et al 2015) spread SARS-CoV and influenza. The same may be seen in SARS-CoV-2 as well. Potential transmission of SARS-CoV-2 via gastrointestinal and urine has to be investigated. In our study patients were more in the age group 30-40 years. The clinical characteristics of COVID-19 were found to be similar to those of SARS-CoV and in accord with recent studies (Huang, C. et al 2020; & Li, Q. et al 2020). Fever, cough and myalgia were the dominant symptoms, gastrointestinal symptoms were less common. The ability of the virus to infect may be different as compared with SARS-CoV, MERS-CoV, and seasonal influenza (Leung, W. K. et al 2003; & Assiri, A. et al 2013). Some of the patients were diagnosed without clinical or X-Ray manifestations of pneumonia, pointing towards the wide array of disease presentation.

Lymphocytopenia and thrombocytopenia were common, as were raised CKMB and LDH levels, a finding that was consistent with the results of two recent reports (Huang, C. et al 2020; & Li, Q. et al 2020). The results of the patients had low lymphocyte counts in elderly patients compared to younger patients. Neutrophil to lymphocyte ratio was more than 3.5 in infected patients. It was observed that lymphocyte count was less in elderly infected patients. The results indicate that with increasing age, the immune cells are more susceptible to damage by the virus, and hence their immunity maybe weakened. Symptomatic patients had more aberrations in laboratory analysis and a worse outcome, so did the elderly population. Despite having similar presentation, patients aged more than 50 years had to face a more severe disease course and increased mortality. Though the overall occurrence of complications and mortality was less in our study, the proportion was significantly high in the geriatric population.

Imaging analysis showed that serial X-Ray monitoring suffices to aid us in our management but the extent of abnormalities does not always correlate with the clinical presentation, as findings varied from nil to extensive involvement irrespective of symptomatology and clinical status. CT imaging should be reserved for severe cases or those unresponsive to treatment. In patients with a normal X-Ray and a negative RT-PCR
assay, a high index of clinical suspicion justifies the use of CT imaging. Most common findings in X-Ray include involvement of bilateral middle and lower zones with peripheral and basal predominance occasionally accompanied by lymphadenopathy, rarely seen were pleural effusion or nodules. CT imaging defines the extent of pulmonary involvement better X-Rays, but is not superior as a diagnostic or prognostic tool in this highly contagious setting. An objective scoring though, less relevant for predicting the disease outcome, puts forth an unbiased perspective and improves the ease of follow up. ECG and CK-MB abnormalities were frequently observed; hence cardiac imaging may be incorporated into the management protocol.

**CONCLUSION**

Out of the patients studied patients presented with fever,cough and sorethroat patients responded to the treatment given and recovered.in patients with comorbidities the presentation was severe presenting with dyspnea some leading to ards.the situation was similar in the older patients with comorbidities. The clinical presentation was milder and complications were seen in very few. Special attention is required to the geriatric population as they are more likely to have a poor outcome. In greater portion of patients, irrespective of symptoms, investigations and imaging showed features of viral illness like lymphopenia, thrombocytopenia, raised LDH and basal predominant lower lung involvement. These markers did not prove to be of much use as prognostic indicators but may help in diagnosis. Raised cardiac markers and ECG abnormalities strongly support use of advanced investigations to rule out subtle complications that we might be missing. The mortality observed in the patients was not primarily due to covid but comorbidities aggravating the illness. It was observed patients with covid had predilection for kidney failure apart from lung complications.

The efforts put forth by our clinicians may bring out fruitful outcome in the near future conquering the corona virus pandemic by vaccination. Further the need for social distancing, hand sanitising and wearing protective gear should be practised incessantly.

**DECLARATIONS**

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**Ethical approval:** approved

**REFERENCES**
