"A COMPREHENSIVE STUDY ON POST COVID COMPLICATIONS AMOUNG PATIENTS IN VIZIANAGARAM DISTRICT, ANDHRA PRADESH, INDIA."

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ABSTRACT:

This study conducted on the analysis of the Post COVID complications of the patients in the three hospitals of Vizianagaram district in Andhra Pradesh, India. Over a period of four months from August 2022 to December 2022, data was collected to evaluate the occurrence of Post COVID complications by the intake of Mercury [in sea food], Zinc, Iron supplements in the medicine. The study is first- ever documented in this specific region. A wide range of data was collected from three major hospitals in Vizianagaram district to analyse the occurrence of post COVID complications. This includes factors such as Intake of zinc and intake of iron through medicine, intake of sea food in diet among the diabetic patients to increase the immune system. It was found that intake of sea food, zinc and iron supplements, may leads to several post COVID complications in diabetic patients. Based on the findings, it is recommended that mostly the diabetic patients should take special care on their diet and intake of medicine to prevent such health complications.

KEYWORDS:

COVID-19, COVID associated Mucormycosis, Pneumococcal pneumonia, CAP, COPD, COVID Pneumonia, Dementia, Allergy, Gastro intestinal problems, Mercury, Iron, Zinc, Corticoides.

After more than an year of the COVID-19 pandemic, many aspects of this new and complicated disease are still poorly understood and characterized [5,6], such as the frequency and risk factors associated with complications after acute COVID-19 illness. Post-COVID-19 syndrome is defined by the symptoms that appear while or after suffering COVID-19 for more than 12 weeks [1,2,3,4]. The syndrome includes affectation of respiratory, cardiovascular, neurological, gastrointestinal, musculoskeletal systems, psychological issues, ear, nose, throat, and dermatological symptoms[2,3,4,7,10,11,12]. The frequency of complications subsequent to the acute phase has important variations in the ranges from 10% to 93% [1,3,8,19,20,21,22,23,24,25]. The studies of post-COVID-19 complications are heterogeneous; including hospitalized versus non-hospitalized patients, patients previous state of health and severity of the disease. In this situation, accruing evidence on the frequency and the manifestation of post COVID complications and related risk factors is needed

The aim of the present study was to describe post-COVID-19 complications, recovery, and return to the usual state of health in the patients that suffered a SARS-CoV-2 infection and estimate the prevalence of the association of diverse risk factors with COVID-19.

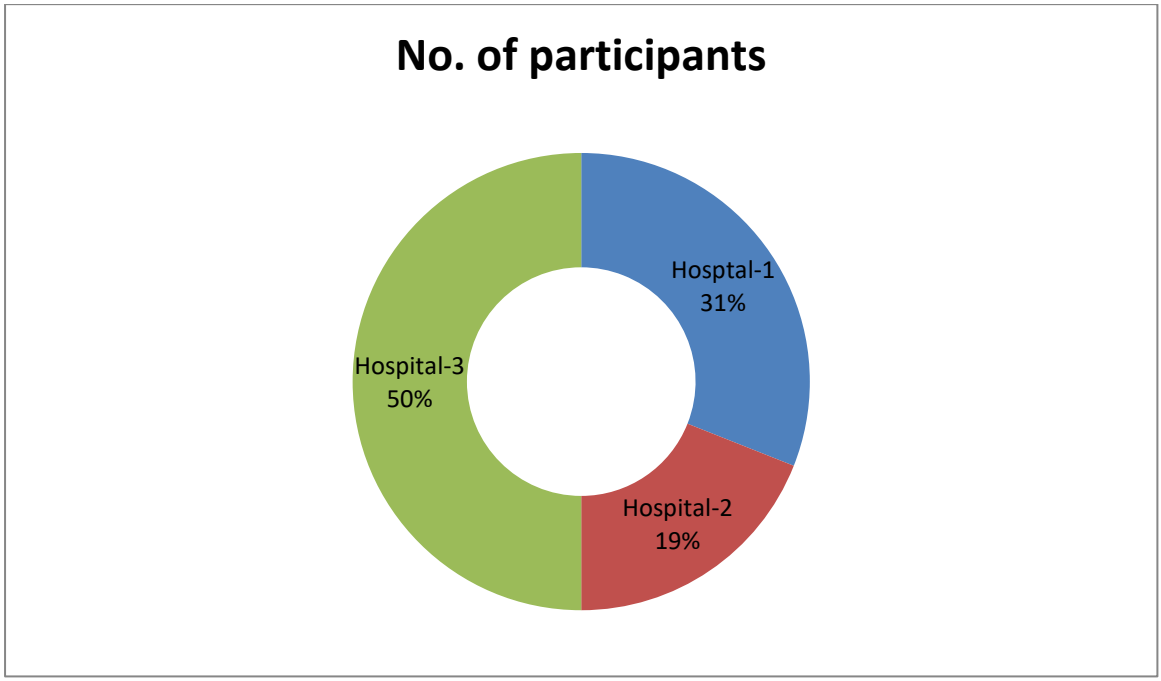
METHODOLOGY:

In March, 2022 a COVID-19 outbreak took place. An epidemiology questionnaire survey has been done in order to observe the outbreak of post COVID complications in patients already suffered 3-6 months prior from COVID-19. There are some patients suffering from Diabetes. The observed post COVID complications are pneumonia, Mucormycosis, cough, fatigue, joint pain, muscular pain, fever, sleep disturbances, dementia, head ache, diarrhae, hair loss and skin rashes.

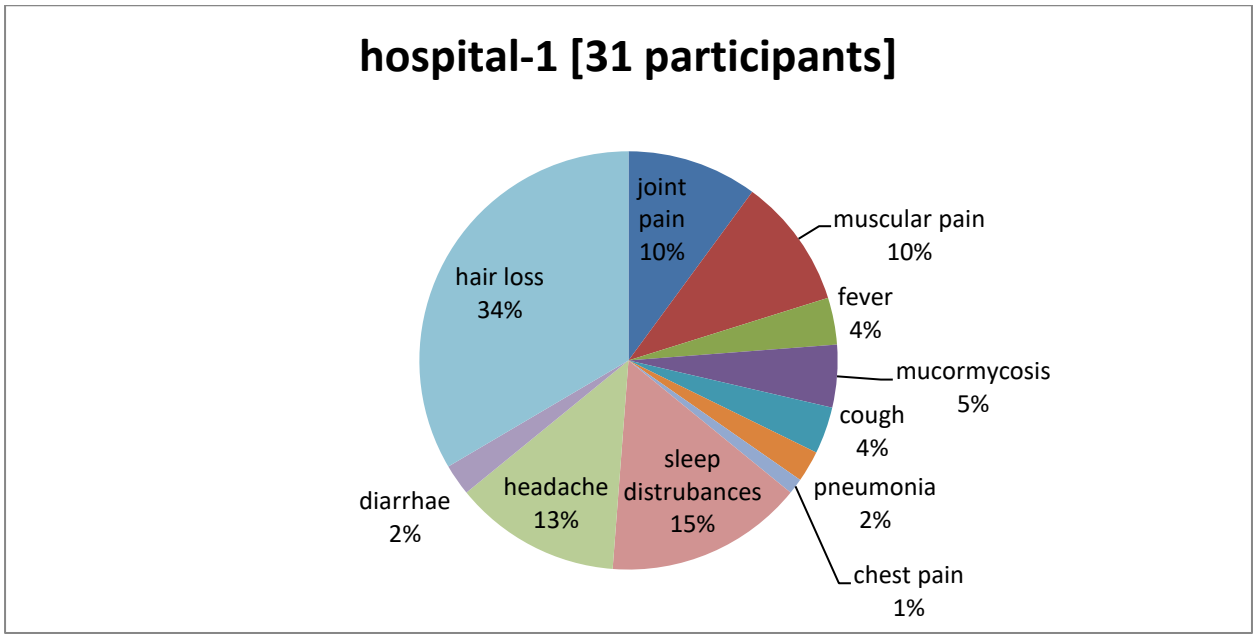
Epidemiology:

The findings from studies reporting outcomes in subacute/ongoing symptomatic COVID-19 and chronic/ post-COVID-19 complications are summarized in Table: 1. An observational cohort study from 3 hospitals in Vizianagaram district, Andhra Pradesh, India evaluated the outcomes of 120 patients discharged alive at 60d by utilizing medical record abstraction and telephone surveys (hereby referred to as the post- COVID-19 study). During the study period, 16% of patients died, while 14% of patients required re-admission. Of 100 patients who completed the telephone survey in this study, 83.3% of patients reported persistent symptoms, including 18.9% with new or worsened symptoms. Dyspnea while walking up the stairs (35.3%) was most commonly reported, while other symptoms included cough (7%), pneumonia (4%), mucormycosis (9.3%), joint pain (35.3%), chest pain (2.3%), sleep

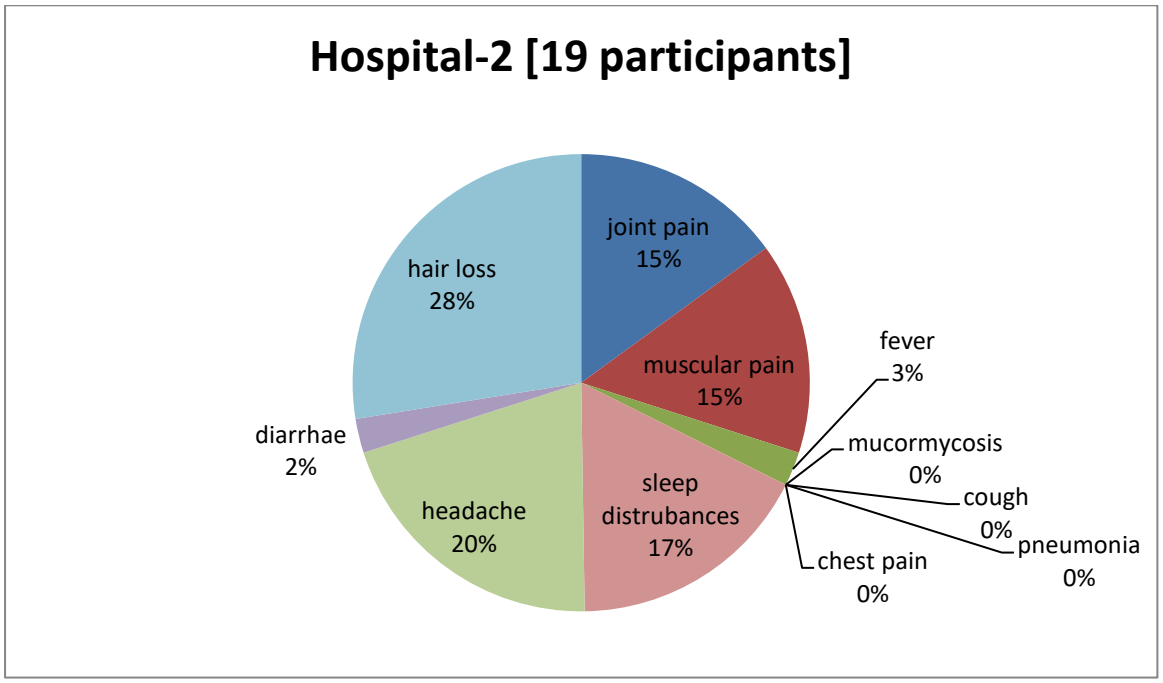
disturbance (49.3%), headache (24.65), diarrhae (18.3%), hair loss (71.3%) were the most commonly reported symptoms, with 55% of patients continuing to experience three or more symptoms. Fatigue, dyspnea and psychological distress, such as post-traumatic stress disorder (PTSD), anxiety, depression and concentration and sleep abnormalities, were noted in approximately 30% or more study participants at the time of follow-up.



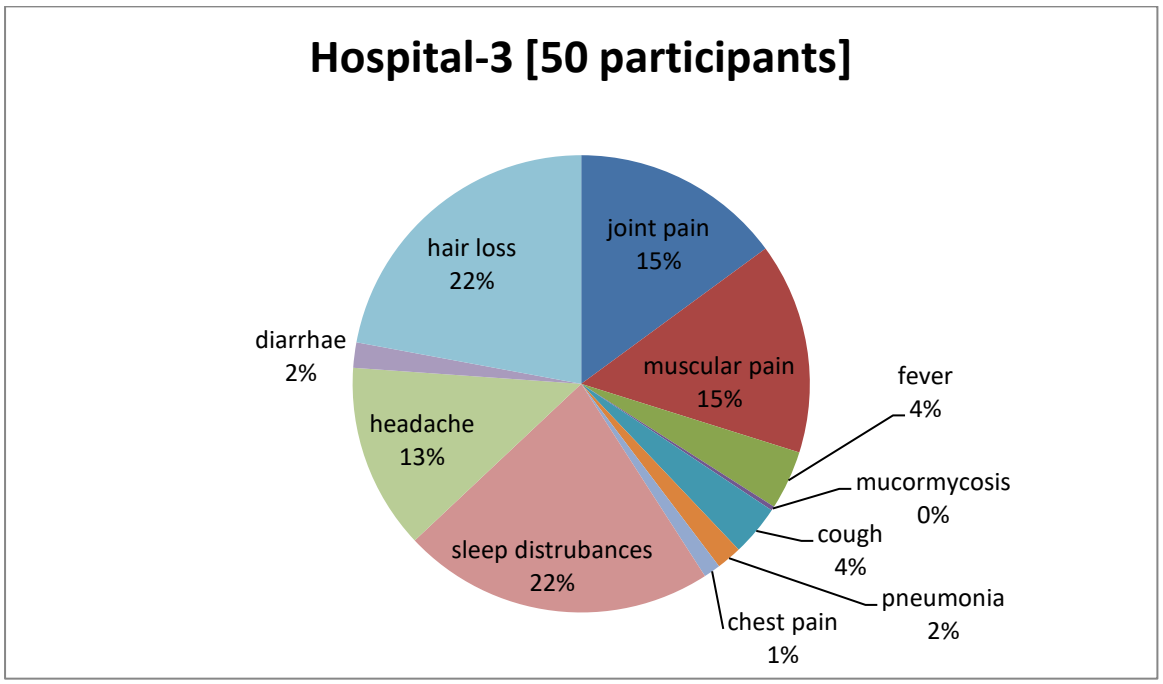
Pie Chart-1: Data showing the patients suffered from POST- COVID complications in three different Hospitals, Vizianagaram district, AndhraPradesh, India



Pie Chart-2: Data showing the patients suffered from POST- COVID complications in Hospital-1, Vizianagaram district, AndhraPradesh, India.



Pie Chart-3: Data showing the patients suffered from POST- COVID complications in Hospital-2, Vizianagaram district, AndhraPradesh, India.



Pie Chart-4: Data showing the patients suffered from POST- COVID complications in Hospital-3, Vizianagaram district, AndhraPradesh, India.

Site	Hospital-1	Hospital-2	Hospital-3
Number of participants	31	19	50
FOLLOW UP			
Duration	2-4 months post COVID symptoms onset	2-4 months post COVID symptoms onset	2-4 months post COVID symptoms onset
Mode of follow up evaluation	Telephone survey	Telephone survey	Telephone survey
BASE LINE CHARACTERSTICS			
Age (yrs)	20-55	20-55	20-55
Female	45%	52%	40%
PRE HEALTH HISTORY			
Diabetes	32%	42%	64%
GENERAL SEQUELAE			
Fatigue	-	-	-
Joint pain	25%	31%	50%
Muscular pain	25%	31%	50%
Fever	9%	5%	14%
RESPIRATORY SEQUELAE			
Mucormycosis	12%	0	16%
Cough	9%	0	6%
Pneumonia	6%	0	6%
CARDIO VASCULAR SEQUELAE			
Chest pain	3%	0	4%
NEUROLOGICAL SEQUELAE			
Sleep distrubances	38%	36%	74%
Dementia	NA	NA	NA
Headache	32%	42%	44%
GASTROINTESTINAL SEQUELENCE			
Diarrhae	6%	5%	6%
DERMATOLOGICAL SEQUELENCE			
Hair loss	83%	57%	74%
Skin rashes	-	-	-

[Table: 1- Findings from clinical studies on the prevalence of post- COVID complications in patients among three hospitals from Vizianagaram district, Andhra Pradesh, India

.*Nutritional considerations:*

Severe COVID-19, similar to other critical illnesses, causes catabolic muscle wasting, feeding difficulties and frailty, each of which is associated with an increased likelihood of poor outcome [41]. Malnutrition has been noted in 26–45% of patients with COVID-19, as evaluated by the Malnutrition Universal Screening Tool in an Italian study[40]. Protocols to provide nutritional support for patients (many of whom suffered from respiratory distress, nausea, diarrhea, with resultant reduction in food intake) continue to be refined[41]. All post-acute COVID-19 follow-up studies that incorporated assessments of health-related quality of life and functional capacity measures have universally reported significant deficits in these domains, including at 6months in the post-acute COVID-19 Chinese study[42,43,44]. Model COVID-19 rehabilitation units such as those in Italy are already routinely assessing acute COVID-19 survivors for swallowing function, nutritional status and measures of functional independence[40].

CONCLUTION:

The present survey conclude that, several Post COVID complications has arised due to impairment of immune system and also poor nutritional practices among the individuals suffered from COVID-19, in which female with age group of 20-55 years are more prone to these infections.

Moreover, it is clear that care for patients with COVID-19 does not conclude at the time of hospital discharge, and interdisciplinary cooperation is needed for comprehensive care of these patients in the outpatient setting. As such, it is crucial for healthcare systems and hospitals to recognize the need to establish dedicated COVID19 clinics[40], where specialists from multiple disciplines are able to provide integrated care. Prioritization of follow-up care may be considered for those at high risk for post- COVID-19, including those who had severe illness during COVID-19 and/or required care in an ICU, those most susceptible to complications and those with the highest burden of persistent symptoms. Given the global scale of this pandemic, it is apparent that the healthcare needs for patients with sequelae of COVID-19 will continue to increase for the foreseeable future. Rising to this challenge will require to control and make use of existing outpatient infrastructure, the development of scalable healthcare models and integration across disciplines for improved mental and physical health of survivors of COVID-19 in the long term.

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