



Overview of Ear, Nose, and Throat Complaints of Covid 19 Inpatients at the University of Muhammadiyah Malang Hospital for the Period April 2021 to June 2021

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ABSTRACT

Background: Covid-19 spread rapidly to other countries and WHO confirmed it as a pandemic disease in March 2020. The virus enters directly to the mucosal surface with a high viral load so it is clear that complaints in the nose and throat area are common. Covid-19 initially appears mainly in the respiratory tract with symptoms such as fever, cough, dyspnea which can quickly turn to acute respiratory distress syndrome. The University of Muhammadiyah Malang Hospital is one of the Covid-19 referral hospitals in East Java since April 2020 and there is no data regarding the description of ear, nose and throat complaints in Covid-19 inpatients being treated at UMM Hospital.

Objective: Finding out the general description of ear, nose and throat (ENT) complaints experienced by Covid-19 inpatients at UMM Hospital in the period of April to June 2021.

Method: Retrospective descriptive by taking data from medical records of Covid-19 inpatients at UMM Hospital in the period April to June 2021 with a total sampling method of 161 inpatients with confirmed diagnosis of Covid-19 by PCR examination during the period April to June 2021.

Results: The study was conducted on 161 medical records with the results that 84 patients were male with 21 severe grade patients, 63 moderate grade patients and 77 female patients with 18 severe grade patients and 59 moderate grade patients. The mortality rate was 26 (16%) with varying age ranges, 78 (48%) patients had comorbidities, with diabetes mellitus as the highest comorbid 31 (40%) patients. Patients with ENT complaints obtained as many as 95 (60%) patients and 66 (44%) patients without ENT complaints. The three most common ENT complaints were rhinitis in 62 (39%) patients, anosmia-hyposmia in 26 (16%) patients and sore throat in 22 (14%) patients.

Conclusion: Most patients were men with moderate grades, with a mortality rate of 16% and 48% of patients with comorbidities. The most ENT complaints were rhinitis 39%, anosmia-hyposmia 16% and sore throat in 14% patients.

Keywords: Covid-19, ENT complaints, UMM Hospital

INTRODUCTION

On December 31, 2019, the WHO's International Health Organization, through its representative office in China, reported a case of pneumonia that is still unknown in the city of Wuhan, Hubei Province. January 7, 2020, China can identify the cause as a new type of coronavirus (novel coronavirus, 2019-nCoV). On February 12, 2020, WHO identified the name of the disease used from the previous 2019-nCoV as "Coronavirus Disease 2019" (COVID-19).

Many studies have confirmed that the nasal cavity is an important area of SARS-CoV-2 infection. Using viral infections in the rhesus monkey model, the researchers compared pathologies and virology from SARS-CoV-2, SARS-CoV, and MERS-CoV. The result of this study is that the pathogenic processes of these viruses have different places; SARS-CoV-2 on the nose and throat, SARS-CoV in the lungs, and MERS-CoV (pneumocytes type 2) (Rocks B, 2020). The viral load of the patient's nasal cavity is higher than that of the pharynx area, both in symptomatic and asymptomatic patients, which indicates that the nasal cavity is the first entrance of the viral infection. Goblet cells and cilia cells in the nose are the primary places in SARS-CoV-2 infection, illustrating that the transmission of primary infection is through droplets. Furthermore, SARS-CoV-2 can be found in the tears of Covid-19 patients and can detect nasal infections through nasolacrimal ductus (Colavita, 2020), so the results of this study can explain the high rate of infection and pathogenicity of Covid-19.

The General Hospital of the University of Muhammadiyah Malang (RSU UMM) has been one of the Covid-19 referral hospitals in East Java since April and was established by the Governor of East Java. The absence of data on the description of nasal and throat ear complaints in Covid-19 patients treated at UMM Hospital made the author want to conduct a study aimed at getting an overview of the state of nasal and throat ear complaints experienced by Covid-19 hospitalization patients at UMM Hospital.

RESEARCH METHODE

The type of research used is descriptive retrospective with the aim of knowing the general picture and description of ENT complaints in Covid-19 hospitalized patients at UMM Hospital for the period April to June 2021, with the technique of sampling is total sampling and obtaining as many as 161 patient medical records. Patient medical records are obtained in the medical records section of UMM Hospital. In the medical record, there is a PCR examination result that shows a positive result, and there is a patient anamnesis sheet in which there are complaints felt by the patient when the patient enters the IGD and recorded into the medical record. Data that has been obtained by researchers from medical records will be analyzed, where it will produce a conclusion. The data is then tabulated and presented in descriptive data form.

RESULTS AND DISCUSSIONS

In this study, 161 patients with a confirmed diagnosis of Covid-19 with PCR examinations were obtained between April 2021 and June 2021. Eighty-four male patients and 77 patients were women.

Table .1 Distribution of Inpatients By Gender

Gender	Sum	Percentage
Man	84	52%
Woman	77	48%
Total	161	100%

The data were obtained from 84 male patients with severe pain, as many as 21 patients, and 63 patients with moderate degrees. In the female sex, as many as 77 patients obtained 18 patients with severe degrees and 59 people in a state of moderate pain are depicted in the table below.

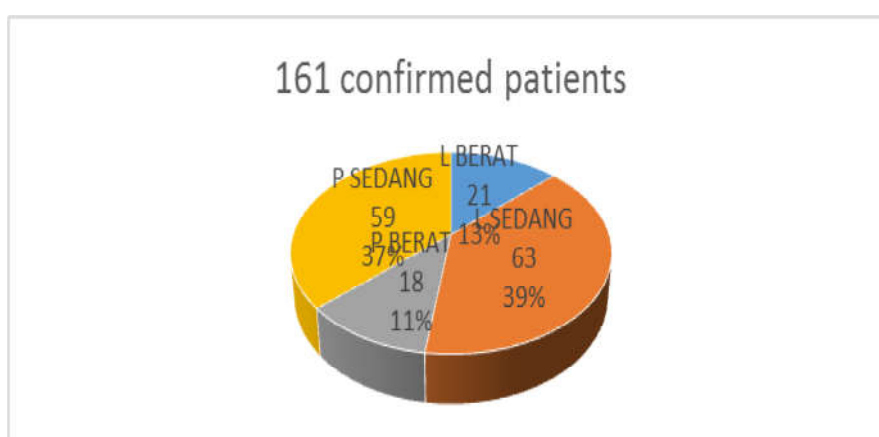


Figure 5.1 Distribution of Covid-19 Inpatients' Sick Degrees

The results of the data obtained mortality rates of as many as 26 (16%) patients from 161 patients, with varying age ranges described in the table below

Table. 2 Distribution of Mortality Rates of Covid-19 Hospitalized Patients

	Number of Patients	Percentage
COMORBID	78	48%
NO COMORBIDITIES	83	52%
Total	161	100%

Based on the results of the data, 78 (48%) patients had comorbidities, and 83 (52%) had no comorbidities. Comorbid contained in patients in the form of hypertension, diabetes mellitus, heart

disease, CVA, tuberculosis, chronic kidney disease (CKD), and coroner's heart disease (CAD) with distributions such as the table below.

Table 3. Distribution By Comorbid

Types of Comorbidities	Number of Patients	Percentage
HYPERTENSION	23	29%
DM	31	40%
HEARTDISEASE	9	11%
CVA	5	0.6%
TB	1	0.01%
CKD	4	0.5%
CAD	6	0.7%

In the medical records obtained, recorded complaints were felt when the patient came to the Emergency Department (IGD) of UMM Hospital. Complaints in the form of non-ear complaints of the throat nose and complaints of the throat nose ear. From the data obtained, 95 (60%) patients with ear complaints or nasal throat and 66 (40%) patients with non-ear complaints of throat or nose, as seen in the following table.

Table 4. Distribution of The Number of Patients with ENT and non-ENT Complaints

Complaints	Sum	Percentage
ENT complaints	95	60%
Non-ENT complaints	66	40%
Total	161	100%

Table 5. Distribution of Complaints non Ear Nose Throat

Complaints	Number of Patients	Percentage
Cough	114	71
Fever	113	70%
Shortness of breath	61	38%
Nauseous	44	27%
Headache	21	13%
Fatigue	19	12%
Diarrhea	12	7%
Abdominal pain	9	6%
Chest pain	6	4%
Gravida	5	3%
Decreased consciousness	5	3%

Based on the table above, there are recorded non-ear complaints of nasal throats experienced by patients, including fever as much as 70%, shortness of breath as much as 38%, nausea as much as 27%, headache as much as 13%, fatigue as much as 12%, diarrhea as much as 7%, abdominal pain as much as 6%, chest pain as much as 4%, patients with gravida as much as 3%, and patients with a decrease in consciousness as much as 3%.

Table 6. Distribution of Throat Nose Ear Complaints

Complaints	Number of Patients	Percentage
Rhinitis	62	39%
Anosmia-hyposmia	26	16%
Throat pain	22	14%
Dysgeusia-ageusia	5	3%
Vertigo	4	2%

From the data above, the throat and nose ear complaints were recorded the most, namely coughing as much as 71%, rhinitis at 62%, anosmia-hyposmia 16%, throat pain as much as 14%, dysgeusia-ageusia as much as 3%, and vertigo as much as 2%.

From the results of several previous studies, it was stated that the most non-ear complaints of the throat nose are cough and fever when compared to complaints of the throat nose ear (Borah H, 2021). This is in accordance with the data in this study where the most complaints of non-ear throat nasal throats are cough as much as 71% and fever 70%.

In this study, it was found that 60% of Covid-19 patients had ent complaints while 40% had non-ent complaints. This is in accordance with research conducted by Borah H, 2021. The most ent complaints experienced by Covid-19 hospitalized patients at UMM Hospital are rhinitis and anosmia-hyposmia, and the least is vertigo. A total of 39% of patients had rhinitis, 16% of patients had anosmia hyposmia, and vertigo was experienced by 2% of patients, while throat pain and dysgeusia-age were experienced by 14% and 3%, respectively. According to some studies, anosmia-hyposmia and dysgeusia-ageusia are the early symptoms found in Covid-19 patients, occurring in the first 5 to 7 days (Vaira LA, 2020). So it is recommended to consider if there are patients who experience this so that isolation is immediately carried out and PCR examination is carried out on the patient. This will be very helpful in the process of enforcing early diagnosis and breaking the chain of transmission of this Covid-19 disease. Until now, there has been no research that can definitively explain the mechanism of disruption of livelihood function and taster function.

Complaints in the vestibular system in this study were found to be vertigo as much as 2%. In his article, Saniasiaya (2020) wrote that the balance disorder complained about by Covid-19 patients should not be considered mild because it has been proven to be a clinical manifestation in Covid-19 patients. Correspondingly, the link between other audiovestibular manifestations such as

hearing loss and tinnitus should be established. Complaints of balance disorders that are still felt after Covid-19 treatment must be consulted to the ENT doctor for a comprehensive examination. Vestibular rehabilitation is highly recommended for good results. (Saniasiaya,2020)

CONCLUSION

Research conducted on the picture of COVID-19 inpatient ENT complaints at UMM Hospital for the period April 2021 to June 2021 shows that the general picture of Covid-19 inpatients among the most patients is male, with moderate degrees, with a mortality rate of 16%, and patients with comorbidities of 48%. Patients who experience ENT complaints are 60%. The most non-ENT complaints were cough (71%) and fever (70%), while the most ENT complaints were rhinitis (39%) and anosmia-hyposmia (16%).

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