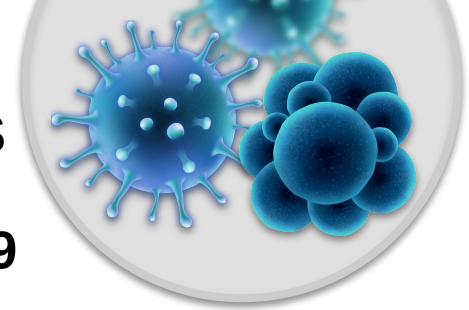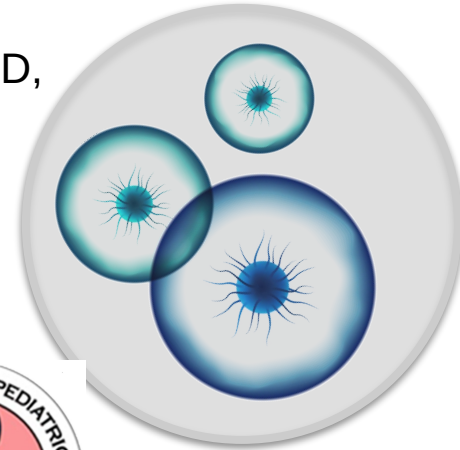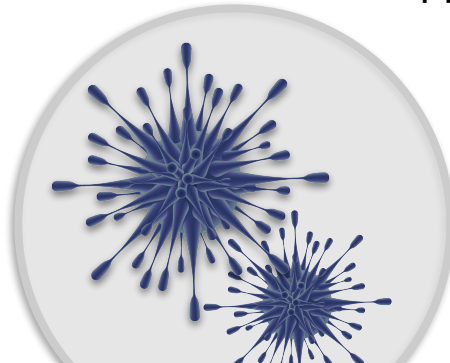# CLINICAL CHARACTERISTICS AND OUTCOMES OF PEDIATRIC PATIENTS WITH SUSPECTED AND CONFIRMED CORONAVIRUS DISEASE 2019 (COVID-19) INFECTION ADMITTED IN A TERTIARY GOVERNMENT HOSPITAL: A 1 YEAR RETROSPECTIVE STUDY

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BACKGROUND

While there is evidence that the burden of COVID-19 infection in hospitalized children is lesser than in their adult counterparts, currently, there are limited reports describing clinical data on COVID-19 patients particularly in pediatric population. This study was conducted to describe the clinical characteristics and outcome of Suspected and Confirmed Coronavirus Disease 2019 (COVID-19) infection in pediatric patients admitted at a tertiary government hospital from March 2020- February 2021.

OBJECTIVES

General Objective:

To describe clinical manifestation and outcome of Suspected COVID-19 infection in pediatric patients admitted at a Tertiary Government Hospital.

Specific Objectives:

1. To describe the clinio-demographic profile of patients as to: Age, gender, co-morbid conditions

2. To identify the clinical presentation and co-morbidities of pediatric patients admitted as Covid 19 suspects

3. To identify management administered during admission (antibiotics, inotropes, steroids, ventilatory support)

4. To describe the clinical outcomes as to length of stay, severity of illness, and disposition (discharged improved, mortality)

5. To compare the clinic demographic profile, diagnostics, treatment and outcome of patients with suspected and confirmed COVID 19 in children.

METHODOLOGY

STUDY DESIGN

Retrospective, descriptive study.

SETTING

The study was conducted in Ospital ng Maynila Medical Center, Manila, Philippines

STUDY POPULATION

The study population was pediatric patients aged 1 day-18 years admitted at this institution as Suspected COVID-19 Infection

INCLUSION CRITERIA

ll patients aged 1 day to18 years previously admitted as Suspected and Confirmed COVID-19 Infection.

EXCLUSION CRITERIA

Patients with incomplete data on patient's chart or file and who were not tested for COVID-19 were excluded in the study.
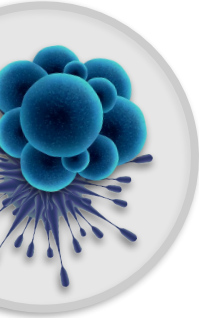
DATA COLLECTION

Records of patients who were admitted at Ospital ng Maynila Medical Center diagnosed with Suspected and Confirmed Coronavirus Disease 2019 (COVID-19) from March 2020- February 2021 were retrieved and reviewed. Data gathered include: age, sex, residence, clinical presentations, COVID- 19 RT- PCR, treatment and clinical outcomes were recorded.
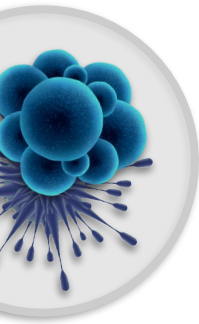
RESULTS

Table 1. Demographic and baseline characteristics of COVID-19 Confirmed and Suspected Pediatric Patients

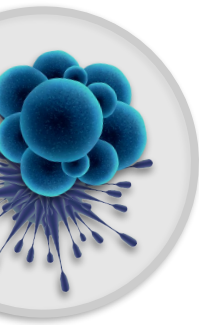| Characteristic		ALL (N=213)		COVID-19 POSITIVE (n=7)		COVID-19 NEGATIVE (n=206)	
		Case	Percent	Case	Percent	Case	Percent
Overall Status	n (Total)	213		7	3.29	206	96.71
Age	1-29 days	14	6.57	1	14.29	13	6.31
	30-365 days	63	29.58	1	14.29	62	30.10
	1-5 years	51	23.94	0	0.00	51	24.76
	6-10 years	31	14.55	1	14.29	30	14.56
	11-15 years	35	16.43	3	42.86	32	15.53
	16-18 years	19	8.92	1	14.29	18	8.71
	Mean	5	-	9	-	5	-
	Median	3	-	11	-	3	-
	Mode	1	-	NO MODE	-	1	-
Sex	Female	100	46.95	2	28.57	98	47.57
	Male	113	53.05	5	71.43	108	52.43
Residence	Manilan	173	81.22	6	85.71	167	81.07
	Non-Manilan	40	18.78	1	14.29	39	18.93

RESULTS

The total number of patients included in the study was 213 pediatric patients. There were 7 (3.29%) patients who had tested positive on COVID-19 based on the result of the RT-PCR while 206 (96.71%) had tested negative. The mean age was 5 years old. Majority were male 53.05% while female 46.95%. In COVID-19 positive patients, where 71.43% were male and 28.57% were female. Large portion were residents of Manila 81.22% while other patients were Non-Manilan 18.78%.
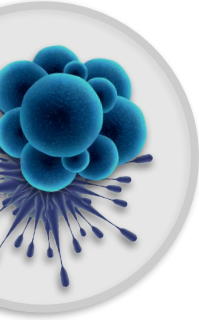
RESULTS

In terms clinical presentation, most patients had fever 153 (71.83%), cough 109 (51.17%) and dyspnea 86 (40.37%). All COVID-19 positive had varied co-morbid conditions while there were 66 (32.03%) COVID-19 negative. There were 155 (72.77%) patients who had been prescribed of antibiotics, 15 (7.04%) with inotropes, and 51 (23.9%) with steroids. The median days on the length of stay among all patients was around 6 days, whilst 15 days for COVID-19 positive patients and around 2.5 days for other diseases. In terms of severity of disease, most patients had moderate 179 (84.0%), followed by severe 19 (8.92%) and critical 15 (7.04%). The mean length of stay was 8 days. Majority of patients were discharged improved 91.55%.
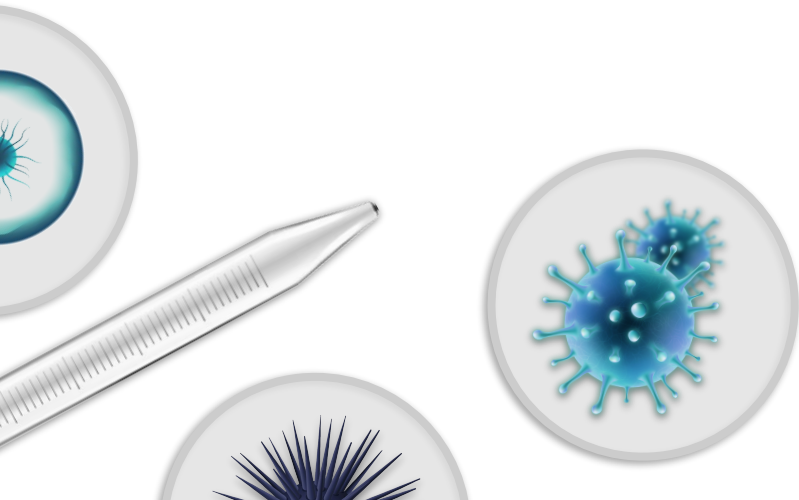
RESULTS

Table 4. Clinical Outcomes of COVID-19 Confirmed and Suspected Pediatric Patients

Characteristics		ALL (n=213)		COVID-19 POSITIVE (n=7)		COVID-19 NEGATIVE (n=206)	
		Case	Percent	Case	Percent	Case	Percent
Length of stay (days)	Mean	8.24	-	16.43	-	7.96	-
	Median	6	-	15	-	2.5	-
	Mode	4	-	7	-	4	-
Disease severity	Mild	0	0.00	0	0.00	0	0.00
	Moderate	179	84.04	6	85.71	173	83.98
	Severe	19	8.92	0	0.00	19	9.22
	Critical	15	7.04	1	14.29	14	6.80
Disposition	Discharged improved	195	91.55	5	71.43	190	92.23
	Mortality	15	7.04	1	14.29	14	6.80
	Home against medical advise	2	0.94	1	14.29	1	0.49
	Transfer to other hospital	1	0.47	0	0.00	1	0.49

CONCLUSION

The COVID-19 pandemic has had a catastrophic effect on global health which can affect pediatric patients and can cause mortality among them. But most pediatric patients have moderate disease and discharged improved.

RECOMMENDATION

The COVID-19 pandemic has had a catastrophic effect on global health. COVID-19 is a new infectious disease that was recently designated a pandemic by the World Health Organization. It is quickly spreading across the globe, infecting and killing millions. Children account for a tiny proportion of COVID-19 cases, and their symptoms are often modest. However, certain instances may develop to severe illness, and early unusual presentations may delay COVID-19 diagnosis, resulting in poor prognosis. It is worth noting that new born babies are vulnerable to this illness and viruses are identified for an extended length of time; therefore, newborns may contribute to community transmission. There is presently preventive standard however no definite treatment. The researcher recommend that further studies is required to determine the cause for age-related variations in COVID-19 clinical characteristics, to examine the involvement of children in community transmission, and to develop therapy and vaccinations for the illness.