

# Features of COVID-19 patients detected during community screening: A study from a rural hospital in Sri Lanka

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## Abstract

We studied the clinical course and virus shedding of all patients referred to Welikanda Hospital, in one month. There were 53 positives for COVID-19 by PCR. 24 (45%) were male, with an age range of 11-94 years. Of these, 41 (77%) were asymptomatic, 9 had cough, 4 had sore throat and six had fever. Pulse, blood pressure, respiratory rate and capillary oxygen were normal in all. A proportion of them had poor prognostic factors: asthma (n=4), hypertension (n=11), age above 60 years (n=9), and diabetes (n=11). Lymphopenia was seen in 20 and elevated CRP in 14. Viral shedding continued beyond 14 days in several persons and continued in symptomatic patients for a significantly longer time than asymptomatic patients. COVID-19 was an asymptomatic or mild illness in this group of people. Several of them continued to be RT-PCR positive even after 14 days. Such cases are an important source of community spread.

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## Introduction

The clinical manifestations of COVID-19 vary from mild to very severe forms. There is evidence of large proportions of asymptomatic persons as an important source of community spread [1]. In Sri Lanka, based on government policy, all having RT-PCR positive are admitted to designated hospitals. They include close

contacts of COVID-19 patients from community and family clusters, arrivals from overseas and those housed in quarantine camps. Here we report an analysis of patients, who were admitted to a specialized treatment centre established to treat COVID-19 patients.

## Methods

We recruited all persons admitted to Welikanda Hospital, Polonnaruwa. Data on demography, past medical history, and symptoms were collected on all admissions and analyzed later. At the time of admission, full blood count, AST and ALT and C reactive protein were done, and full blood count was repeated on Day 5. Two RT-PCR tests were done on the 14th day, and if positive, repeated after seven days till two tests became negative. All patients admitted were treated with hydroxychloroquine at a dose of 400 mg a day, for 10 days, as per government policy at the time. All patients were seen by the first author (AS).

## Results

### Demographic details

There were 55 patients, two were not included in the analyses (4-year-old daughter and 37-year-old mother of two adolescent women who stayed in the hospital with their infected relatives, but never became RT-PCR positive). Of the other 53, 24 (45%) were males. The mean age was 42.4 years (SD 16.5) with a range of 11-94 years, while 9 (16%) were above 60 years.

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**Table 1. Comparison of COVID-19 patients with and without symptoms**

	<i>Symptomatic</i> (n=12, 23%)	<i>Asymptomatic</i> (n=41, 77%)
Females	7 (58%)	22 (54%)
Presence of co-morbidities	7 (58%)	18 (44%)
Mean age in years (SD)	49.2 (21.5)	40.4 (14.4)
Number with lymphopenia (<2x10 <sup>9</sup> /L)	5 (42%)	15 (58%)
Number with thrombocytopenia (<150,100x10 <sup>9</sup> /L)	0	1
Number with high CRP (>5 mg/L)	3 (25%)	11(37%)
Number with positive RT-PCR on day 14	9 (75%)	7 (17%)*

\*Chi-square (Yates continuity correction) shows a significant difference between the two groups about RT-PCR positivity on 14<sup>th</sup> day of admission to the hospital,  $\chi^2$  (1, n=53) = 12.16, p =0.001, phi -0.528

A majority (n=41, 77.4%) did not report any symptoms, 6 patients had multiple symptoms, 3 had only sore throat two had only fever one only a mild cough. Other symptoms included headache, myalgia and chest pain. Six had fever on admission; in 5 it lasted 24–48 hours and in the other patient for 6 days. Pulse, blood pressure, respiratory rate and capillary oxygen saturation were normal and remained stable throughout the hospital stay. The distribution of comorbidities was, asthma (n=4, 8%), hypertension (n=11, 21%), and diabetes (n=11, 21%).

#### Lab investigations

Only one asymptomatic patient had a platelet count of below 150 x10<sup>9</sup>. All patients showed an increase in lymphocyte and platelet counts on the 5th-day compared to the first day. Among 14 who had high CRP, 10 had lymphopenia. In 32 patients AST & ALT values were available and they were less than 38U/L and 71U/L respectively among all.

#### Viral shedding

There were 16 (30%) who continued to shed virus on day 14 of hospitalization. Five of them were RT-PCR positive on the 21st day. Two symptomatic patients became negative after 28 days; a 94-year-old woman after 33 days, and a 67-year-old woman who had fever for 6 days only after 38 days. An asymptomatic 50-year-old woman became negative after 70 days. Viral shedding in symptomatic patients occurred for a significantly longer period than in asymptomatic patients (see table). Except for the duration of viral shedding, the two groups were similar.

## Discussion

The study sample was identified during community screening and therefore reflects a proportion of persons who would be asymptomatic or pauci-symptomatic in the community. In this cluster, 77% were asymptomatic at the time of diagnosis and remained so until they were confirmed “recovered” by a repeat RT-PCR, after 2-3 weeks. This underlines the importance of asymptomatic COVID-19 individuals as a source of spread of infection in the community.

Globally, the number of asymptomatic persons carrying the COVID-19 virus is likely to be in the millions [2]. In the early days of the pandemic, the proportions were small; 17% in the ‘Diamond Princess’ Cruise ship, 31% of Japanese who were evacuated from Wuhan. However, with detection of more cases from mass screening programs, the proportions of asymptomatic persons have reached as high as 50% in Icelandic and 50-75% in Von Euganeo, a village close to the epicentre in Italy [3,4]. In China, recent reports indicate that 78% of new infections are asymptomatic. This is in contrast to previous epidemics such as SARS and MERS where most of the infected individuals were symptomatic (87% and 87.5% respectively) [5].

The duration of viral shedding, detected by PCR, is quite prolonged in COVID-19. According to available evidence, it can be 8-37 days, with a median duration of 20 days [6]. However, it is uncertain that the presence of viral RNA on RT-PCR tests for prolonged periods, although defined as viral shedding, indicate infectiousness, as there are reports of negative viral cultures in persons with prolonged virus shedding [7].

The majority of persons who develop Covid-19 infection in a community setting are asymptomatic or mildly symptomatic, with an unremarkable routine laboratory test. They are, therefore, difficult to detect and can be a major source of spread of infection in the community.

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### Conflicts of interest

None declared.

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### Ethical Approval

Obtained from Ethics Review Committee, Faculty of Medicine & Allied Sciences, Rajarata University of Sri Lanka. ERC Number: ERC/2020/39.

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