

of underreporting of people diagnosed with TB and under diagnosis (if people with TB cannot access health care or are not diagnosed when they do).

The national prevalence to notification (P:N) ratio was 2.84. In other words, for every notified case, the actual prevalent cases were 2.84.

The Joinpoint regression analysis showed a significant decreasing pattern in incidence rates in India between 1990 and 2019 for both male and female; but larger decline was observed in case of females. Similar pattern was observed for mortality where the declining trend was sharper for females. The age effect showed that both incidence and mortality significantly increased with advancing age.

Most studies from developed countries show a high protective efficacy of BCG vaccine against TBM. In studies from India, the protective efficacy has not been high and the results are conflicting. It has been postulated that other risk factors such as poor nutrition, low standard of living and exposure to a high infective dose of the bacilli from a household contact may overcome the protective effect of BCG in the Indian population. The United Nation has set 2030 as target for TB elimination.

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EPIDEMIOLOGICAL CHARACTERISTICS OF THE INCIDENCE OF COVID-19 IN SRI LANKA

Introduction

2019 Novel Coronavirus (2019-nCoV) is a virus (more specifically, a coronavirus) identified as the cause of an outbreak of respiratory illness first detected in Wuhan, China. Early on, many of the patients in the outbreak in Wuhan, China reportedly had some link to a large sea-food and animal market, suggesting animal-to-person spread. However, a growing number of

patients reportedly have not had exposure to animal markets, suggesting person-to-person spread is occurring. There is growing evidence that 2019-nCoV can spread from person to person in the community and in health care settings. At this time, it is unclear how easily or sustainably this virus is spreading between people [1, 2, 3].

Objectives

To give a territorial-temporal characterization of the incidence of COVID 19 in Sri Lanka and evaluate the effectiveness of the organization of treatment and preventive measures.

Materials and research methods

We analyzed literature and statistical data on COVID 19 cases in Sri Lanka. Through the analysis we were able to brief the management and preventive measures that are applied in Sri Lanka.

The results of the research and their discussion

The first case of the virus in Sri Lanka was confirmed on 27 January 2020, after a 44-year-old Chinese woman from Hubei, China, was admitted to the Infectious Disease Hospital in Angoda, Sri Lanka. As of 1 September 2021, a total of 462,767 COVID-19 cases had been recorded in the country, 386,509 patients had recovered from the disease, and 10,140 patients had died.

The first reported case involving a Sri Lankan outside the country was reported in Italy on 3 March 2020. As of 23 March 2020, forty-five quarantine centres had been built in the country by the Sri Lanka Army as a preventative measure in an attempt to stop the spread of the pandemic. Nearly 3,500 people were placed under quarantine in 45 quarantine centres, including 31 foreigners from 14 countries. As of 25 March 2020, Sri Lankan authorities tracked down over 14,000 people who had come into contact with identified patients, and ordered those people to self-quarantine. As of 16 April 2020, Sri Lanka was named the 16th highest-risk country for contracting the virus. In April 2020, Sri Lanka's response to the pandemic was ranked as the 9th best in the world [1, 2, 3, 4].

Although Sri Lanka was successful in handling the first wave of the pandemic, the government's failure to handle the second and the third waves of the pandemic have caused a spike in COVID-19 deaths since November 2020. There was a sudden increase in COVID-19 cases after the relaxation of health restrictions during the Sinhala and Tamil New Year in April 2021. The highly contagious Delta variant has been responsible for the considerably high fatality rate in the country since August 2021. As of August 2021, Sri Lanka became the country with the fourth-largest number of daily deaths in the world by population just behind Georgia, Tunisia, and Malaysia. Government negligence in implementing a lockdown, negligent behaviour of the general public, and teachers' protests have all contributed to the record spike of COVID-19 cases and deaths in the country [5–7].

On 20 August 2021, government imposed a ten-day lockdown island-wide to curb the spread of COVID-19 cases. The decision to lockdown the country came following the immense pressure from the health authorities and the political parties who demanded complete lockdown after Sri Lanka surpassed 1,000 deaths over the course of eight days. It is believed that the COVID-19 cases in the country are underreported by the officials and allegations regarding the manipulation of details regarding the COVID-19 pandemic in the country were also raised.

Some businesses imposed a voluntary lockdown for a period of 10 to 14 days during the early parts of August when the government refused to impose a lockdown due to the worsening situation of the economy. The Central Bank of Sri Lanka raised interest rates in August 2021, and Sri Lanka became the first nation in Asia to tighten the monetary policy during the pandemic era. On 27 August 2021, the government extended the lockdown to 6 September 2021 as the daily death toll surpassed 200 for the first time since the pandemic began (figure 1).

Colombo is located in Sri Lanka. It is the capital city and also the largest by population. This city is known for being a popular tourist destination, with tourism fueling the local economy. It is also a financial center of Sri Lanka. The city has a population of 752,993 people. The

larger urban area has a population of over 2.3 million, So because of the urban condition of this District and significant crowded population constantly busy with their schedules is the main risk factor for the highest recorded cases. It was influenced by the inadequate knowledge about the disease and weakness of their protective strategies such as wearing the masks, and proper hand hygiene. Because of the availability of the PCR facility centres in Colombo when compared to other rural areas, most of the people are going to check their Fistatus, because of that most Covid cases are reported in Colombo district.

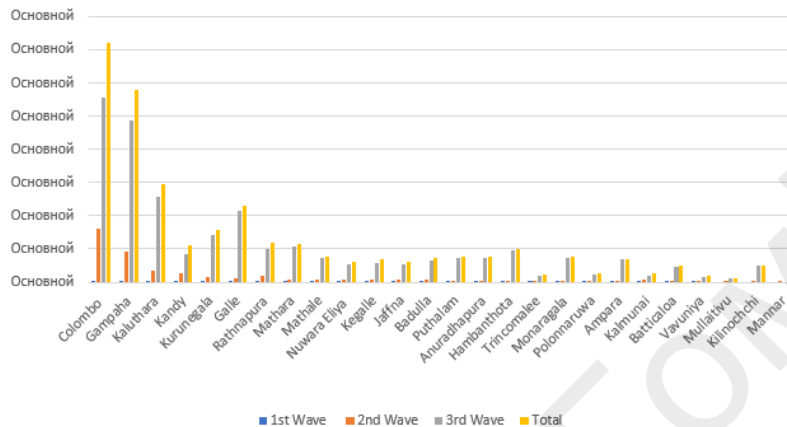


Figure 1 — Distribution of cases of COVID-19 by territories

In Sri Lanka age 70 years and more are at highest risk of getting COVID-19. The major reasons for this result is due to the high prevalence of Diabetes mellitus, Hypertension, cardiac and other medical comorbidities 'are more with elderly population, along with that it causes the immunosuppression which leads to classic pathway to get Covid 19. In Sri Lanka the majority of the population is elderly. As well as most of them are on immunosuppressant's for their other medical cormobidities. As a conclusion most of elderly patients in the age 70 and more have high risk of getting COVID-19 (figure 2).

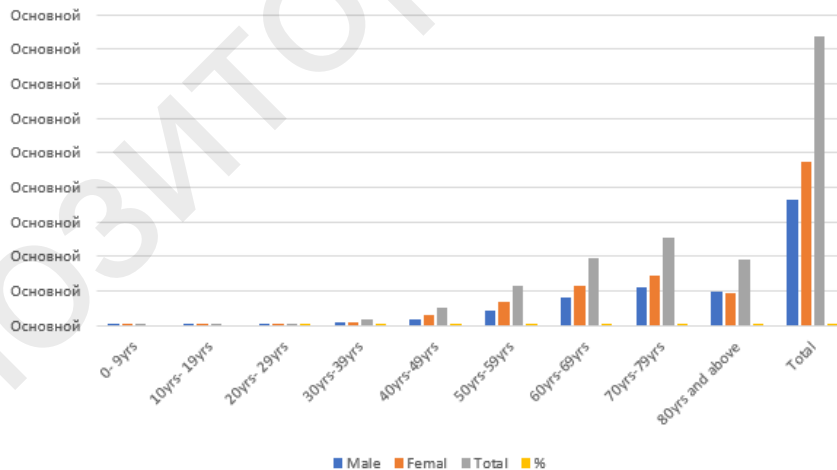


Figure 2 — Distribution of COVID cases by age and sex

Conclusions

Compared to other countries currently at increased risk of COVID-19, the profile of Sri Lankan patients in the initial passive case detection phase is compatible with patients' sex distribution, clinical symptoms and disease course. In contrast, the younger age of patients, milder disease outcome and low mortality observed in local patients may reflect the early success that had sustained for more than nine months following the rapid preventive and curative health

sector response to the pandemic in Sri Lanka. However, once severe disease is established, the factors that determined fatality remain the same as in other countries.

The findings suggest that rapid response to COVID-19 is of use in containing the disease quite early in the epidemic, which could lead to lasting effects on the disease epidemiology in countries, as evident in this study from Sri Lanka. In this regard, well-established public health systems as well as case detection surveillance networks are equally important at national level for achieving long-term benefits on novel diseases such as COVID-19.

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