

# Outcome of Hypertensive patient, who had Covid-19 Pneumonia requiring Oxygen therapy– A retrospective observational study in a Low income setting.

Ayeshani Rajapakse<sup>(1)\*</sup> Ashani Rathnayaka<sup>(1)</sup>,Prabhashini Kumarihamy<sup>(2)</sup>  
S D K Medagama<sup>(3)</sup>,Sahan Perera<sup>(2)</sup> Hiranya Abeysinghe<sup>(2)</sup>

1.Consultant Anaesthetist, Base Hospital, Teldeniya, Sri Lanka \*Corresponding author,2.Consultant Physician, Base Hospital, Teldeniya, Sri Lanka 3.Consultant Psychiatrist, District Base hospital, Teldeniya

## Background

COVID - 19 infection has become a major cause of death worldwide killing millions of people. Many studies on the effects of Hypertension on Covid-19 were published.

There are studies, which showed increased in mortality and severity in COVID-19 Pneumonia patients who were having Hypertension<sup>(1,2)</sup>. But some studies concluded that there is no effect of Hypertension on severity of COVID-19 Pneumonia<sup>(3)</sup>. It was also concluded that although Hypertension increases mortality in COVID-19 patients further evaluation is needed<sup>(4)</sup>. Therefore it is still not confirmed about the outcome, of patients with Hypertension having COVID- 19 pneumonia.

## Objective

To assess the outcome of Hypertensive patients having COVID-19 Pneumonia, treated in intensive care(ICU) and high dependency unit(HDU) and to compare it with patients without Hypertension.

## Method

A retrospective observational study was conducted in COVID designated Intensive care unit and High dependency unit in Base Hospital Teldeniya, Sri Lanka. All patients with positive COVID-19 test, who developed COVID pneumonia and was oxygen dependent, requiring ICU or HDU care were included in the study. Data collection was done using patient records from 1<sup>st</sup> of January 2021 to 30<sup>th</sup> of June 2021.

## Results

Total of 189 patients were admitted to either ICU or HDU requiring oxygen therapy due to COVID pneumonia during the study period. Out of them 67% were males and 33% were females. The mean age was 60.59 years with SD of 14.9. Age range was 16 to 94 years. Out of them 87 patients (46.03%) had hypertension. Out of hypertensive patients 48.2% were females and 51.8% were males. Out of the Hypertensive patients 68.53 % of patients had another co-morbid disease and the commonest was diabetes mellitus. Out of patients with hypertension and admitted to ICU and HDU, 22.47% died in the hospital. It's a 57.1% from total deaths in ICU and HDU. The difference of the percentage of deaths among hypertensive and non-hypertensive patients were not significant (P=0.188).

## Conclusion

With referring to above results there is no significant difference in mortality between hypertensive and non-hypertensive patients with COVID-19 Pneumonia dependent on oxygen in ICU and HDU in Base Hospital, Teldeniya, Sri Lanka. Therefore the outcome of Hypertensive patients who have COVID-19 Pneumonia need to be analyzed further using larger samples.

## References

- 1.Pranata R, Lim MA, Huang I, Raharjo SB, Lukito AA. Hypertension is associated with increased mortality and severity of disease in COVID-19 pneumonia: a systematic review, meta-analysis and meta-regression. *Journal of the renin-angiotensin-aldosterone system: JRAAS*. 2020 Apr;21(2).
- 2.Du Y, Zhou N, Zha W, Lv Y. Hypertension is a clinically important risk factor for critical illness and mortality in COVID-19: A meta-analysis. *Nutrition, Metabolism and Cardiovascular Diseases*. 2021 Mar 10;31(3):745-55.
- 3.Schiffirin EL, Flack JM, Ito S, Muntner P, Webb RC. Hypertension and COVID-19.
- 4.Zeng Z, Sha T, Zhang Y, Wu F, Hu H, Li H, Han J, Song W, Huang Q, Chen Z. Hypertension in patients hospitalized with COVID-19 in Wuhan, China: a single-center retrospective observational study. *MedRxiv*. 2020 Jan 1.