

Thrombocytopaenia in critically ill COVID-19 patients: An observational study from a single centre

Ashani Ratnayake^{(1)*}, Prabhashini Kumarihamy⁽²⁾, Ayeshani Rajapakse⁽¹⁾, Hiranya Abeysinghe⁽²⁾, Sahan Perera⁽²⁾

S D K Medagama⁽³⁾

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

Background

SARS-CoV-2 infection can cause manifestations in multiple systems in the body.

Haematological system is one such system which can be affected by both SARS-CoV-2 infection and critical illness.

There are some studies that have shown that thrombocytopaenia can be associated in patients with SARS-CoV-2 infection.

There is minimal data on its prevalence and outcome on critically ill patients.

Identifying the presence of thrombocytopaenia and its consequences is important to manage critically ill COVID-19 patients.

Methods

- A retrospective observational study was done in COVID designated Intensive care unit and High dependency unit in Base Hospital- Teldeniya, Sri Lanka.
- All patients with positive SARS-CoV-2 testing who later develops pneumonia with oxygen dependency and requiring ICU or HDU care were included in the study.
- Data was collected from patient records for the duration from 1st of January 2021 to 30th of June 2021.
- Their demographic data, data related to platelet counts and other causes leading to thrombocytopaenia were collected.
- Thrombocytopaenia was categorised as mild (platelet count $100-150 \times 10^9/L$), Moderate ($50-100 \times 10^9/L$) and severe (less than $50 \times 10^9/L$)

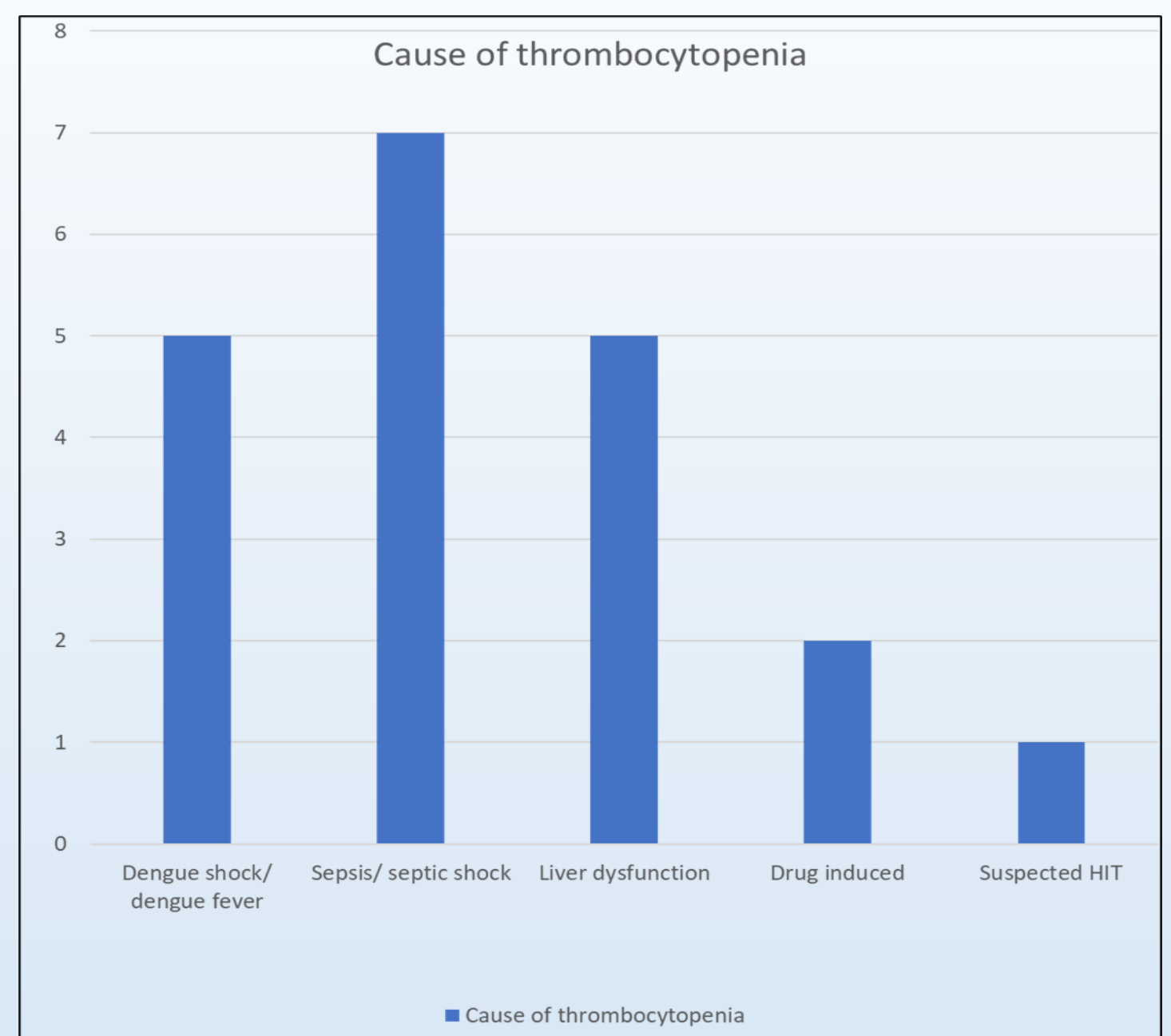


Figure 1

Results

Total of 189 patients were admitted to either ICU or HDU requiring oxygen therapy due to COVID pneumonia during the study period.

The mean age was 60.59 years with SD of 14.9. Age range was 16 to 94 years.

63 patients (33.33%) had thrombocytopaenia with 8 (12.69%), 19 (30.15%) and 36 (57.14%) had severe, moderate and mild thrombocytopaenia respectively.

28 (44.4%) of the patients had low platelets at the time of admission. 28.5% of the patients had another cause for thrombocytopaenia.

Figure 1 shows other causes contributed to thrombocytopaenia.

Out of the patents who had thrombocytopaenia 17 (26.9%) patients died. This was equal to 48.7% of all critical care deaths.

The proportion of death among patients with thrombocytopaenia was found to be significant compared to that of patients with a normal platelet count. ($p=0.045$)

Conclusions

Thrombocytopaenia may arise due to multiple aetiologies in critically ill patients.

Our study shows that at least 1/3 of the critically ill patients with COVID-19 infection develop thrombocytopaenia at some point of their course of illness.

It is important to have an insight on the progression of the illness and the outcome in order to plan discharge and follow up for these patients.