

LETTER TO THE EDITOR

Open Access



The forgotten people with thalassemia in the time of COVID-19: South Asian perspective

Mohammad Sorowar Hossain^{1,2*} , Enayetur Raheem¹ and Mahbulul H. Siddiquee^{1,3}

Abstract

South Asia is the hotspot of beta-thalassemia, with an estimated 200,000 patients whose lives depend on regular blood transfusion. Due to COVID-19 pandemic, many countries have adopted unprecedented lockdown to minimize the spread of transmission. Restriction of nationwide human mobility and fear of COVID-19 infection has put thalassemia patients in a life-threatening situation because of an acute shortage of blood supply. As a public health preparedness strategy during a crisis like COVID-19 pandemic, the plights of thalassemia patients should be considered. Government-sponsored community blood-banks needs to be established or coverage expanded as a safety net for the thalassemia patients in lower- and middle-income countries.

Keywords: Thalassemia, Bangladesh, Blood transfusion, Blood donation

Letter to the Editor,

South Asia has been confronting a silent epidemic of thalassemia- a life-threatening inherited hemoglobin disorder. Over 200,000 estimated thalassemia patients (45–70 million carriers) live in the Indian Subcontinent whose lives depend on regular blood transfusion with chelation therapy [1–3]. There is an acute crisis of availability of blood for thalassemia patients especially in South Asia.

While access to blood remains a persistent challenge, the coronavirus pandemic (as of April 11, 2020) has exacerbated the circumstances. To minimize the spread of SARS-CoV-2, the majority of the South-Asian countries have adopted lockdown measures. The lockdown has impacted people's lives in unprecedented ways—for example, the lack of public transportation to restrict people's movement. It is likely that such restrictions will also make it difficult, or even impossible at times, for both the blood donors and recipients (i.e., the thalassemia

patients). Data do not exist to measure how this would impact the lives of thalassemia patients. Understandably, the ongoing lockdown is likely to put a significant portion of the patients into a life-threatening condition due to an acute shortage of blood supply at the community level. Community clubs and NGOs have to postpone blood donation programs. In addition, friends and relatives are not coming forward to donate blood due to panic of COVID-19 infection [4, 5]. For instance, in Kolkata (India), over 80% of blood supply in 108 blood banks comes from blood donation camps.

Uncertainty around COVID-19, followed by lockdown, may impact Bangladesh significantly. Here 10–12% of the 160 million population are thalassemia carriers, and the issue is largely neglected at the policy level [1]. A recent community-level study showed that the educated segment of the society (over 67% of the college students) have not heard about "thalassemia." Furthermore, 40% are reluctant to donate blood for thalassemia patients due to misconceptions and stigmatization [6].

Another hospital-based study found that over 62% of HbE beta-thalassemia patients are transfusion-dependent, requiring transfusion 1 to 4 times every month [1].

*Correspondence: sorowar.hossain@brfbd.org

¹ Department of Emerging and Neglected Diseases (END), Biomedical Research Foundation, Dhaka, Bangladesh

Full list of author information is available at the end of the article



© The Author(s) 2020. This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>. The Creative Commons Public Domain Dedication waiver (<http://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article, unless otherwise stated in a credit line to the data.

Most of the specialized hospitals for thalassemia patients are in Dhaka, the capital city of Bangladesh. Around 70% of the people of Bangladesh lives in rural areas. Moreover, most families cannot afford to travel to Dhaka for treatment purposes due to financial constraints; the lockdown has made the situation even worse due to the unavailability of public transports. Our unpublished report found that 78% of the families with thalassaemic children struggle to get blood who could afford to come to the Dhaka city for treatment (Bangladesh Thalassaemia Samity Hospital).

The current lockdown has exposed a severe weakness in the supply chain of blood, particularly for thalassemia patients. Recruiting voluntary donors is a big challenge in developing countries due to a lack of awareness. In Bangladesh, according to a WHO report, over 600,000 units of blood were collected against an estimated demand of 800,000 in 2016 [7]. It is likely that 70,000–80,000 thalassaemia patients were left out of this count since thalassaemia is not considered a public health problem. Only 31% of the collection is from voluntary donors while two thirds (~70%) come from relatives and friends of the patients [7]. Only half of the district health facilities (out of 64) have blood banks and nearly 41% of these faces a shortage of supply [7]. Moreover, a significant portion of the collected blood becomes unusable due to inadequate storage facilities, underutilization, and limited shelf-life of blood.

In future public health preparedness strategy during a crisis like COVID-19 pandemic, the issue of transfusion-dependent patients must be prioritized, particularly in thalassaemia prone countries in South Asia. In this perspective, the community-based blood banking needs to be encouraged and expanded with government sponsorship to keep the vulnerable patients within a safety net.

Acknowledgements

We would like to acknowledge Bangladesh Thalassaemia Samity Hospital for contributing unpublished information.

Authors' contributions

MSH conceived the concept. All authors contributed to preparing this article. All authors read and approved the final manuscript.

Funding

No funding for this work.

Availability of data and materials

Not applicable.

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Competing interests

The authors declare no conflict of interest.

Author details

¹ Department of Emerging and Neglected Diseases (END), Biomedical Research Foundation, Dhaka, Bangladesh. ² School of Environment and Life Sciences, Independent University, Bangladesh (IUB), Dhaka, Bangladesh. ³ Department of Mathematics and Natural Sciences (MNS), BRAC University, Dhaka 1212, Bangladesh.

Received: 15 April 2020 Accepted: 14 September 2020

Published online: 25 September 2020

References

- Hossain MS, Raheem E, Sultana TA, Ferdous S, Nahar N, Islam S, et al. Thalassaemias in South Asia: clinical lessons learnt from Bangladesh. *Orphanet J Rare Dis*. 2017;12(1):93.
- Colah R, Italia K. Burden of thalassaemia in India: the road map for control. *Pediatric HematolOncol J*. 2017;2(4):79–84.
- Ahmed S. Genetic haemoglobin disorders in Pakistan. *Natl J Health Sci*. 2017;2:95–9.
- The Times of India. COVID-19: Blood banks in Bengal run dry due to lockdown. 2020. <https://timesofindia.indiatimes.com/city/kolkata/covid-19-blood-banks-in-west-bengal-run-dry-due-to-lockdown/articleshow/74805410.cms>.
- The Tribune. Coronavirus worries take toll on thalassaemia patients. 2020. <https://tribune.com.pk/story/2184269/1-coronavirus-worries-take-toll-thalassaemia-patients-2/>.
- Hossain MS, Hasan MM, Raheem E, Islam MS, AlMosabbir A, Petrou M, Telfer P, Siddiquee K. Lack of knowledge and misperceptions about thalassaemia among college students in Bangladesh: a cross-sectional baseline study. *Orphanet J Rare Dis*. 2020;15(1):54.
- WHO. Bangladesh is still to meet the demand of safe blood supply. <https://www.searo.who.int/bangladesh/bloodonor/en/>.

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Ready to submit your research? Choose BMC and benefit from:

- fast, convenient online submission
- thorough peer review by experienced researchers in your field
- rapid publication on acceptance
- support for research data, including large and complex data types
- gold Open Access which fosters wider collaboration and increased citations
- maximum visibility for your research: over 100M website views per year

At BMC, research is always in progress.

Learn more biomedcentral.com/submissions

