EDITORIAL

AKI & COVID19: Intertwining of Known and Unknown and Looking forward

'Faster than fairies, faster than witches,
Bridges and houses, hedges and ditches;
And charging along like troops in a battle'

Like that of R L Stevenson wrote COVID19 pandemic has been marauding the world since last few weeks of 2019. With a label of novel corona virus the SARS-CoV-2 is presumed and in reality proved to be a highly contagious and dreadly fatal agent. According to the World Health Organization (WHO), viral diseases continue to emerge and represent a serious issues to public health.'[1] Bill Gates labelled it as the real pandemic and added 'When I think back on the pace of scientific advances in 2020, I am stunned, humans have never made more progress on any disease in a year than the world did on COVID-19 this year.'[2] Startling the professionals and nonprofessionals alike it has been changing the world order in all frontiers of life and living. Individual to community, community to nationhood, politics to governance, trade and commerce, economy and human interactions plus relationship. In a mix situation of mostly known and less known about the organism endeavors set in to combat with addon unfolded knowledge and builtup skill. It has been found that there are two prongs of attack by the virus, highly contagious spreading fast and multiorgan involvement with high case fatality in selective subjects, with comorbidities. Acute Kidney Injury (AKI) is one of the surrogates of the COVID19 multiorgan cascade.

AKI is a situation of renal response to many insults where in most cases other surrogate organs are initiators. The clinical impacts of AKI are also multiorgan involvements more so at the biochemical level with serious consequences on cell and organ functions. AKI is one of the most frequent organ failures encountered in intensive care units (ICU). Since the first definition by Homer W Smith in the fifties, more than 30 different definitions have been used, leading to a sizeable epidemiological heterogeneity with incidence ranging from 5 to 25%. Since 2004, three definitions, based on serum creatinine and urine output, respectively: RIFLE, AKIN, and the actual KDIGO classification have been proposed allowing homogenization of AKI definitions as well as epidemiological association between AKI and chronic kidney disease (CKD). [3] However the short-term outcome is all or none law, death or survival. But the long term is CKD with other morbidities. The pathophysiological pathways that lead to AKI is direct through effects on renal mass or indirect through many pathways and functions. AKI indeed is a syndrome and merely not a single disease at crossroad and an ultimate denominator of survival.

COVID19 has its onslaught on kidneys directly and indirectly and surely with consequences. Being a new disease entity with many unknowns and knowledge gaps, COVID19 have provided a great opportunity for studies. COVID19 a multisystem or multiorgan syndrome as it is, opens up avenues for all specialties, clinical and nonclinical as well. It's a scope for producing more and more knowledge accumulations that has been tapped vigorously and successfully by researchers beyond our boundary. The Institute for Health Metrics and Evaluation (IHME) have been tracking and collating these.[4] We have been lagging behind as usual. We missed many trails this time too, like that was with Dengue, Chikonguniya and many others.

.However, in this bleak situation a descriptive hospital-based study has been endeavored and is published in this issue of the JBCPS. It's a welcome exercise indeed and has revealed many information that are not similar to reports of other countries. The differences should be readdressed that may provide many important tenets. Reports are coming up of differences in susceptibility and severity of COVID19 of people of different genetic makeup and regional grooming.[5] The documentation provided some operational issues besides a country specific snapshot that should be picked up for future actions and studies. In addition, a temporal follow up of the AKI series of this study may unfold many information that may reshape long-term management in this behalf.

Some interesting matters happened with studies and publications on COVID19 around the world. First of all is the Infodemic confusing, perplexing and misguiding

people and power and programs.[6,7] The second one is retraction of some infamous publications on COVID19 therapy and medications even in the Lancet and the NEJM.[8,9] The third one is Co-endemicity with some other viral and parasitic diseases plus cross reactivity with dengue and may be with others.[10] And on control of some others like malaria as well.[11]

COVID19 and AKI are no doubt intertwined with known and unknown plus predictability and unpredictability. Yuval Noah Harari retorted, 'How can we summarize the Covid year from a broad historical perspective? Many people believe that the terrible toll coronavirus has taken demonstrates humanity's helplessness in the face of nature's might. In fact, 2020 has shown that humanity is far from helpless. Epidemics are no longer uncontrollable forces of nature. Science has turned them into a manageable challenge. Why, then, has there been so much death and suffering? Because of bad political decisions.'[12] Nobel Laureate Yunus said, 'Covid-19 has brought out many problems, but also many opportunities. It has pushed the world, in a sense, to reset, to start over.'[13]

Let's look forward to loosen the intertwining through capture more and more knowledge.

[Conflicts of Interests: None]

(J Bangladesh Coll Phys Surg 2022; 40:)
DOI: https://doi.org/10.3329/jbcps.v40i2.58685

Emran Bin Yunus
Internist & Nephrologist, Visiting Professor of Public Health, Premiere University, Chattogram; communication
E-mail: ebyunus@yahoo.com

References:

1. Cascella M, Rajnik M, Aleem A, Dulebohn SC, Di Napoli R. Features, Evaluation, and Treatment of Coronavirus (COVID-19). 2022 Feb 5. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan–. PMID: 32150360.
2. Kluger J: What Bill Gates Thinks About the State of the Fight Against COVID-19. The Time; December 22, 2020.
3. Jamme M: Outcome of Acute Kidney Injury: How to Make a Difference? Ann Intensive Care; 2021 (r11):60.
4. ihme@healthdata.org
5. Singh PP et al:The major genetic risk factor for severe COVID 19 does not show any association among South Asian populations. Science Report. Springer Nature. 2021;11:1234
6. Pertwee E et al: An epidemic of uncertainty: rumors, conspiracy theories and vaccine hesitancy. Nat Med. 2022; 28(3):456-459.
7. Orso D et al: Infodemic and the spread of fake news in the COVID-19-era. Eur J Emerg Med. 2020; 27(5):327-328.
8. O Chatherine. The Scientist. 2020, June 4.
9. Sengupta S (Editorial): An editorial perspective on the infamous COVID 19 studies retracted by Lancet and NEJM. Indian J Opthalmology. 2020; 68(7)1247-8
10. Omame A, et al: COVID-19 and dengue co-infection in Brazil: optimal control and cost-effectiveness analysis. Eur Phys J Plus. 2021;136(10):1090.
11. Zawawi A, et al: The impact of COVID-19 pandemic on malaria elimination. Parasitic Epidemiol Control. 2020 Nov; 11: e00187.
12. Harari YN: Lessons from a year of COVID. The Financial Times. 2021; 26 February.
13. Yunus M: In wake of pandemic, we must create a better world. Vatican News. 2020, May 16. ,<EOF> 25/03/22