

Radioactivity Properties of Natural Salts Proving a Strong Prophylaxis in Covid-19 Pandemic

Dr. Alok Thakur

Received: 5 April 2021 Accepted: 4 May 2021 Published: 15 May 2021

Abstract

Global data on Covid-19 pandemic morbidity/mortality from most of the rich and poor countries has baffled public healthcare professionals. Pathogenic mechanism of SARS-CoV-2 virus is still not clear even after about a year of pandemic sweeping the whole globe and killing more than 1.9 million deaths till writing of paper (08 January 2021). Socioeconomic status of populations seems to have played a vital role for the huge differences in mortality among various countries. It is strange that despite extremely unhygienic local environments, disadvantaged population fared much better in the Covid-19 pandemic in poor countries compared to the populations in developed countries having great healthcare infrastructure with the only exception being Japan. All circumstantial evidence points towards the difference in salts (natural or processed) consumed. Natural salts have many trace elements including radioactive elements. Radioactive radiations are known to inactivate pathogens.

Index terms— prophylaxis; viral infection; natural salts; trace minerals; radioactive elements.

1 I.

Background the whole world continued to face worst public health and economic catastrophe from the onslaught of Covid-19 pandemic over more than a year with no solution in sight so far. SARS-CoV-2 virus is one of the most virulent strains of coronavirus that has inflicted colossal hardships on the global population primarily in terms of untimely deaths of loved ones and huge financial losses. Economy of the whole world is jeopardised. Perpetual fear of death forced the human race to adopt new living normal on a global scale. There are several health disorders manifestations that resulted from the infected and uninfected populations and created additional healthcare burdens on an unprecedented scale. Frequent usage of sanitizers, and prolonged wearing of face masks caused many skin and health disorders especially mental disorders.

Global data over a year on Covid-19 morbidity and mortality among most of the rich and poor countries baffled public healthcare professionals and doctors all over the world. The USA and the EU nations like the UK, France, Italy, and Spain reported morbidity/mortality per million several hundred times more than the poor or underdeveloped countries like India, Myanmar, Laos, Cambodia, Vietnam, Nepal and Afghanistan where morbidity/mortality is zero or significantly low. No explanation has come up till date for this huge difference in morbidity/mortality between the rich and poor countries.

Stretched isolation and lockdowns resulted in separation from elderly parents and children and vice versa have caused elevated anxiety levels that led to onset of many non-communicable health disorders including suicides. 2 Reported spikes in suicides by individual and families for want of money and uncertain future including the suicide by 54 year old Thomas Schäfer, German finance minister, are causes of serious concern. Spurt in clinical manifestation of several noncommunicable health disorders of unknown origin like mild to severe abdominal pain, hypo-and hypertension, disturbed sleep, myalgia, convulsions, mental disorders like compulsive obsessive disorder (COD), prolonged constipation, gastrointestinal (GI) disorders, skin disorders like stress rashes, warts and allergy, and many more are being reported from all over the world. Aggravation of pre-existed health disorders is also being reported.

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According to the Johns Hopkins Coronavirus Resource Center data, the pandemic caused more than 88.5 million cases and 1.9 million deaths globally; 1 India reportedly had more than 10.4 million cases with death toll of 150,606 at the time of writing on by 08 th January, 2021 and numbers are galloping with every passing day. Despite the vast global pool of healthcare knowledge no ideal treatment has been evolved so far. The virus has been found to affect almost all organs including the brain. Cases of blood clots and existence of virus in seminal fluid have also been increasingly reported thus affecting sustainability of the human race. Near absence or short life of antibodies in symptomatic subjects is a major cause of concern leading to frequent relapses and dimming the hope of any effective long term vaccine. On an average, a sizable majority of this adult population observes at least 5-6 fasts in a year and consume rock salt even if they are totally dependent on the pure sodium salt; its importance will be discussed later.

3 III.

4 Hypothesis

Based on the clinical experience for almost a decade on root cause of increasing incidence and prevalence of non-communicable diseases and simultaneous observations on influenza like illness (ILI) and vector born morbidities, it is hypothesized that SARS-CoV-2 morbidity/mortality is inversely proportional to consumption of natural salts or directly proportional to the pure sodium chloride table salt:

The hypothesis is aimed to find an answer for the huge difference of morbidity/mortality in economically rich and poor countries, with special reference to Japan that has lowest morbidity/mortality among rich countries with the similar healthcare infrastructure.

IV. Inactivating effects of radioactive radiations on viruses were studied in the past. 9,10 It seems that even occasional intake of natural rock salt provided enough radioactive radiations to inactivate attacking viruses and thus enable the body to fight onslaught of pathogens successfully. No other explanation supports such a low morbidity/mortality in India where 65.97% of 1.35 billion disadvantaged population lives in villages and is deprived of adequate nourishment with little or no modern healthcare system. c) Radioactivity processes in human body: Host of radioactive elements found in human body play very critical role in many metabolic functions e.g. iodine for thyroid. These radioactive elements ^{238}U , ^{234}U , ^{232}Th , ^{210}Po , ^{210}Pb , ^{40}K , ^{226}Ra , ^{228}Ra , ^{14}C , ^7Be , ^{22}Na , ^{137}Cs and ^{90}Sr enters the body mostly through dietary route and many others listed exclusively in Table-1. The concentration of the gamma emitting radionuclides, except for ^{40}K , in human is so small that their detection is difficult. 11,12 On natural decay radioactive elements emit α , β , and γ radiations and get transformed into secondary radionuclides or daughter nuclides and granddaughter nuclides and so on emitting radiations till radioactive. However, one year data from India on morbidity/mortality projected a different picture showing that high SES population from affluent urban areas were found to be affected more; these people consume ultra refined iodised table salt.

5 Discussions

Processing of salt: Ultra refining of natural salts salt removes MMTE that contribute about 14% by weight. The US Food and Drug Administration (USFDA) have identified 60 elements of the natural salt as essential nutrients. 13 In June 2016, the US National Research Council labelled 29 of these 60 micro-and trace-elements as "possibly" or "probably" essential and beneficial to human health; these elements include bromine, boron, chromium, calcium, copper, fluoride, iodine, iron, manganese, magnesium, molybdenum, potassium, phosphorus, selenium, silver, sulphur, and zinc. 14% fraction of natural salt comprising of MMTE that contains these 29 identified essential elements is large enough to ignore and neglect. 14, 15, 16, 17 It is important to discuss Covid-19 mortality in Afghanistan and India where extensive salt iodization programmes were implemented in last 50 years. Afghanistan accomplished almost 100 percent salt iodization programmes with 11 salt processing plants under UNICEF funding. Afghanistan achieved 66.2% adequate iodized salt consumption and 33.8% inadequate iodized salt way back in 2013. 20 On the other hand healthcare infrastructure is dismal in Afghanistan and thus reported a greater number of casualties per million compared to other countries like Myanmar, Sri Lanka and Pakistan. Among underdeveloped or poor Programmes: Global salt iodization programmes initiated by WHO and UNICEF in early 1960s with an aim to eliminate iodine deficiency disorders (IDD) mainly goitre. For example in India, the last 50 years of state sponsored programme on forced consumption of iodized salt through ban on natural sea salt could not eliminate sporadic prevalence of thyroid disorders and rather it has attained epidemic status along with other NCDs. Today, it is hard to find a family where thyroid disorder patients are not available. In India, every third Indian suffers from a thyroid disorder. 18 Hypothyroidism has graduated from endemic to silent pandemic on a global scale in the last 50-55 years. In 2016, Levothyroxine (synthetic thyroxine) was prescribed to more than 114 million hypothyroidism patients in the USA alone and retained number one position in top 300 drugs sold even in 2019. 19 These global observations speak loud on the failure of the fit-forall iodization programmes. Increasing rates of incidence of NCD clearly found to follow the salt iodization growth trajectory in every country.

Iodization was thought to be magic wand for IDD and every government world over were convinced for its implementation irrespective of iodine deficiency perhaps under commercial compulsions from salt industry. Even the Asia's largest Indian slum in Mumbai -DHARAVI -spread over 2.1 sq kms with a population of 0.7 million where implementation WHO guidelines of social distancing, face mask, and sanitizers was a daunting task reported only 86 deaths by 1 st July 2020. 23 It was thought to be the most challenging task to contain the virus in the community where hundreds of people use the same toilet. Underlying cause for extremely low mortality appeared to be the consumption of crystal sea salt by the majority of the 0.7 million deprived class.

This hypothesis fits well to explain zero or low mortality among other poor countries like Myanmar as well distant Southeast Asian countries like Cambodia and Laos that are largely depended on natural salts. The hypothesis also explained low mortality among supposedly high risk group of elderly (>70 years) who have more exposure to natural salts during their early life span compared to youths who are wary of observing fast. The American and European populations are almost totally dependent upon highly processed pure sodium table salt deprived of trace elements compared to populations of Asia and Africa and this trend is amply demonstrated in recent mayhem caused by Covid-19 pandemic proving prophylaxis properties of the natural salts.

V.

6 Conclusions

Sooner or later some therapeutics or vaccine for SARS-CoV-2 virus may see the light of the day but by then another epidemic or pandemic may be knocking at the door. Already another wave of infection in Wuhan, the UK, Germany and Sweden showed significant variation in the SARS-CoV-2 virus characteristics. Outbreaks of several epidemics like H1N1, H1N7, EBOLA, ZIKA and MERS occurred one after another in the past and now SARS-CoV-2 has spread across the world. It is an unbreakable chain with a huge burden on a country's healthcare system and economy. Moreover, it is impossible to exercise WHO guidelines of social distancing etc. for long time. It has also been experienced that a host of vaccines and therapeutics developed earlier are little effective for SARS-CoV-2 infection resulting in over 1.9 million deaths till date and the situation is not likely to improve during the outbreak of another epidemic/pandemic. Hence a better and simple solution is required which is inexpensive, regular, and faster to implement. Based on radioactive properties, it is strongly experienced that regular consumption of natural salts offers the best prophylaxis solution against viral pandemic and would be helpful in improving global health. Moreover, natural salt doesn't have any harmful side effects as it was consumed and tested till a 6-7 decades ago by everyone world over for ages. ^{1 2}

¹Radioactivity Properties of Natural Salts Proving a Strong Prophylaxis in Covid-19 Pandemic

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a) World Health Organization (WHO): Several long lockdowns, face masks and social distancing as per the WHO guidelines could not impede increasing morbidity/mortality rates in developed countries despite robust healthcare infrastructure. Global healthcare

way this pandemic is going to go -it is going to get worse and worse and worse.” Now most of the healthca
 28 Gallium 0.001
 ppm
 29 Germanium 0.001
 ppm

[Note: c) Socioeconomic Status (SES) and dietary habits of natives in rich and poor countries were also studied to see if there is any bearing on pandemic strike and survival. d) A passing reference to ethnicity has also been considered. An important input stems from the mortality of two affluent practicing Indian-American doctors in New Jersey, USA, in the first week of May 2020. For the purpose of study, a preliminary comparison was made with extreme poverty stricken subjects in India, Table-3: 8 : The present study is supplemented by an earlier study made in 2015 on prevalence of non-communicable diseases (NCD) involving 314 subjects from 78 families comprising children and elderly population of both genders across India that indicated significant role of ultra refined table salt for the onset of NCD. The study was initiated during K © 2021 Global Journals treatment of chronic diseases and subjects were media. f) Religious Practices:]

Figure 1:

| S. No. | Element | Concentration | Half-life Period |
|--------|--------------|---------------|----------------------------|
| 1. | Protactinium | <0.001 ppm | 1.17 minutes |
| 2. | Francium | < 1.0 ppm | 22 minutes |
| 3. | Astatine | <0.001 ppm | 8.7 hours |
| 4. | Promethium | Unstable | 17.7 years |
| 5. | Actinium | < 0.001 ppm | 21.77 years |
| 6. | Polonium | < 0.001 ppm | 102 years |
| 7. | Radium | < 0.001 ppm | 1600 years |
| 8. | Thorium | < 0.001 ppm | 7.54x10 ⁴ years |
| 9. | Neptunium | < 0.001 ppm | 2.14x10 ⁶ years |
| 10. | Uranium | < 0.001 ppm | 2.34x10 ⁷ years |
| 11. | Plutonium | < 0.001 ppm | 8.0x10 ⁷ years |
| 12. | Technetium | Unstable | 4.21x10 ⁶ years |

d) SES Linkage with Mortality: Lower SES populations were suspected to be more vulnerable to Covid-19 pandemic for reasons of:

- Weak health infrastructure,
- High rate of poverty,
- Malnutrition, and
- Poor living conditions like an unsanitary/unhygienic environment.

Figure 2: Table - 4

Acknowledgements: Author is grateful to all participants.

.1 Conflict of Interests: None

Funding: None

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