Nutritional aspect for SARS-CoV-2 infection- current perspectives

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Sir,

SARS-CoV-2 pandemic has seeped through the world like never before. The infection count as well as mortality count is increasing day by day. Till now 9 million patients are affected worldwide and mortality count is 4 lakhs[1] .No proven definitive curative therapy has been found out till now. Current set of management is in very early stage of development with guidelines changing very fast as newer and newer data is emerging. No drug is found to be successful in all stages of diseases and medical researchers are continuing their fight for newer curative modalities of treatment. It is a well known fact that nutritional aspect play a very important role in preventive as well as curative aspect of viral diseases, same data can be extrapolated to this newer infection. Modification of dietary habits as well as balanced diets is extremely helpful in better prognosis of the patients [2].

Malnutrition is rampant now worldwide. According to world health organization, Malnutrition refers to deficiencies, excesses or imbalances in a person's intake of energy and/or nutrients [3]. The review by Chinese authors adds a note to assess nutritional status of patients before starting treatment for SARS- COv 2 infection[4]. Considering the prevalence of malnutrition in general population, this is one of the important risk factor for poorer outcome in this infection. it is very important to assess the malnutrition in admitted patients of covid with recommended nutritional assessment tools like MUST or NRS 2002.Nutritional assessment should be first step in nutritional management of COVID patients.

Whenever patients with SARS- Cov -2 infection with malnutrition (either undernutrition or overnutrition) are encountered, either indirect calorimetric nutritional needs are to be calculated or when it is unavailable in hospitals, weight based formulas are equally good , 30 kcal per kg body weight per day; is guiding value for energy intake in older persons, this value should be individually adjusted with regards to nutritional status, physical activity level, disease status and tolerance. 1 g protein per kg body weight per day in older persons; Fat and carbohydrate needs are adapted to the energy needs while considering an energy ratio from fat and carbohydrates between 30:70 (subjects with no respiratory deficiency) to 50:50 (ventilated patients).

Along with macronutrients, micronutrients also play an important role in immune response of host for these individuals. vitamin A and D also B vitamins, vitamin C, omega-3 polyunsaturated fatty acids, as well as selenium, zinc and iron play helps important role in boosting immune response. Micronutrient deficiency should be treated by nutraceuticals, there is no evidence to support role of supraphysiologic doses of micronutrients merely to prevent or treat COVID infection.

If patients are admitted in intensive care units and on physiologic support systems, it is very important to assess the daily caloric needs of the patients.Entereal nutrition as well as parenteral nutrition are reasonable choices for patients who cannot meet their daily caloric requirements through normal diets and these individuals should be given oral nutritional supplements (ONS).

For a viral disease like SARS- COV 2 infection where entire world is looking beyond pharmacologic therapies, option of nutritional therapies for enhancing the immunity as well as prevention of complications arising from infection is something needs to be explored. In this era of lockdowns and social distancing norms in place, balanced diet is something which can be bit difficult but with appropriate knowledge and plans in place, we can overcome this problem.

REFERENCES

1. WHO Coronavirus Disease (COVID-19) Dashboard. https://covid19.who.int/?gclid=EAIaIQobChMI59jctM2a6gIV2ARyCh3DoQuLEAAYASAAEgKOHfD_BwE
2. Barazzoni R, Bischoff SC, Krznaric Z, Pirlich M, Singer P, endorsed by the ESPEN Council, Espen expert statements and practical guidance for nutritional management of individuals with sars-cov-2 infection, Clinical Nutrition, https://doi.org/10.1016/j.clnu.2020.03.022.
3. Blosser M, Mercedes DO (2005) Malnutrition: quantifying the health impact at national and local levels. World Health Organization, Geneva. (2005). (WHO Environmental Burden of Disease Series, No. 12)
4. Short KR, Kedzierska K, van de Sandt CE. Back to the Future: Lessons Learned From the 1918 Influenza Pandemic. Front Cell Infect Microbiol. 2018 Oct 8;8:343

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