Preventive Medicine in the Times of COVID-19

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Alcmaeon of Croton is considered the founder of preventive medicine with writings dating back to the VI and V centuries BC. He sustained that interventions on temperament, nutrition, and environment could promote the maintenance of good health.
Jumping forward to 2005, Dr. Kennedy et al. studied 103 children suffering from acute lymphocytic leukemia (ALL). They observed that the concentrations of vitamin A, vitamin E, carotenoids, flavonoids, and the "ROS absorption capacity" were directly related to: a) lower reductions in chemotherapy doses, b) lower incidence of infection, c) improved quality of life, d) less delays in chemotherapy protocol programs, e) reduced days of hospitalization. Conversely the quantity of 8-hydroxy-deoxyguanidine in the blood mononucleates (an expression of the state of cellular oxidation) showed an inverse trend. The authors concluded that in children with ALL there were less side effects in association with a diet rich in natural antioxidants. In other words, dietary supplementation promoted increased effectiveness of treatment, even in terms of prognosis and survival.

We are currently facing a pandemic caused by the COVID-19 coronavirus. Our government has implemented a series of prophylactic measures to help limit contagion. Researchers are experimenting with antiviral drugs to treat this RNA-virus. Others are attempting to prevent the violent pro-inflammatory cytokine storms in patients with initial respiratory insufficiency. To achieve this they are experimenting with drugs like Tocilizumab, already used for chronic rheumatic pathologies.

Our appeal, and the reason we referred back to Alcmeone and Dr. Kennedy, is to take preventive measures before the disease occurs. In other words it is necessary to offer the population advice on how to improve their physical condition. The WHO have declared a pandemic and the measures adopted serve to slow down the growth in the number of people exposed to COVID-19, and this is an extremely important measure to keep our health system operational. What we are unaware of is the percentage of the general population who sooner or later will come into contact with COVID-19. It should be considered that foreign experts estimate contact for about 60% of the population. How can we prepare ourselves for this situation ?
The statistics indicate that elderly male smokers are those most likely to be overcome by the disease. What factor do they share? High oxidative stress. We know that advanced age reduces the physiological antioxidant capacity of the organism. Many of the younger patients who died were suffering from neoplastic pathologies or metabolic syndromes, both conditions that augment oxidative stress. Smoking enormously increases oxidative stress.

It is known that coronavirus infections can lead to intense inflammation and cytokine storms that generate extremely high oxidative stress, causing the cells to enter apoptosis.

It is therefore believed that increasing the antioxidant capacity using all physical, chemical, and natural means could have a protective effect against the complications of the virus.

This objective can be pursued in various ways.

Numerous scientific papers demonstrate a reduction in oxidative stress from ion resonance, achieved through exposure to extremely low frequency and intensity electromagnetic waves (ELF EMF).

Dietary supplements with antioxidant actions like Mioamin F (a mixture based on isolated milk whey proteins, hydrolyzed collagen, leucine, HMB, Vitamin B6), are currently in use at the Hospital of Pavia for patients in pre-intensive care. More simply, a diet high in fruit, vegetables, and fish has an antioxidant action, while the total elimination of smoking has an enormous impact. There are also dietary supplements like vitamin D and Omega3 that, at normal doses, can modulate the T-lymphocyte subclasses and reduce inflammation.

For the above reasons we sustain that these measures should be taken, because they could mitigate the risk of complications from COVID-19.

https://www.ncbi.nlm.nih.gov/pubmed/19037782

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