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Japan observes cross protection from COVID-19 by JEV

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Novel hypothesis by Edogawa Hospital researchers to hasten a relief to the pandemic

A significant discrepancy in mortality among even geographically close regions could be explained by a cross protection induced by Japanese Encephalitis Vaccine (JEV) and/or Tick-Borne Encephalitis Vaccine (TEV) according to Dr Shojiro Katoh, President, Edogawa Hospital, Japan.

He along with his international team of researchers of Edogawa Evolutionary Lab of Science (EELS), have published their opinion in Archives of Academic Emergency Medicine, a peer reviewed journal.

The COVID-19 pandemic with 2,478,634 people infected, and 170,000 deaths globally, has caused unprecedented implications on day-to-day life and the global economy. Loss of lives in Spain (20,852) and Italy (24,114) are more than China (4,632), the epicenter of the outbreak, where JEV and/or TEV is included in national immunization schedule, like Japan (186) and Austria (463).

In China, the mortality is 2.3% compared to 7.3% in Italy and 10.41% in Spain, where JEV and/or TEV is not routine. JEV immunization is widespread, or in the national vaccination programs of Japan, Laos, Malaysia, Nepal, South Korea, Thailand, Sri Lanka, and Vietnam where the mortality rate is relatively lower than countries that don't.

Going by the above data, cross-protection conferred by the encephalitis vaccine(s) could be thought as a reason for lower mortality, which must be proven by necessary validations. If any such cross protection could be confirmed to be of help even at least for a specific group, especially the vulnerable population such as the elderly and those with co-morbid conditions, may pave way for arriving at efficient strategies for tackling COVID-19.

"As we are not sure when a drug or vaccine will be available to relieve humankind from the clutches of this pandemic, our modest contribution through this hypothesis, we do hope may trigger similar or better thoughtful ideas," said Dr. Katoh, whose inter-disciplinary team of clinicians and scientists are working on biomaterials based in vitro viral replication cum drug discovery platforms, food supplements to enhance immunity and wellness and autologous Natural Killer cells (NK cells) based immunotherapy for cancer. Their Biomaterial lab jointly with JBM Inc is working on cell culture and tissue engineering in regenerative medicine, beside novel drug development systems and methodologies for tackling both cancer and viruses.