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Comorbidity assessment essential in Covid-19 treatment: IIT-I study

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Prior knowledge of an individual's health is critical to avoid fatal repercussions of Covid-19 treatment, according to a study by Indian Institute Technology Indore.

The institute's Infection Bio-engineering group headed by assistant professor Dr Hem Chandra Jha conducted the study on associated comorbidities with Covid-19 such as cardiovascular diseases, hypertension, lung diseases, diabetes, liver ailments, neurological disorders and immunocompromised conditions.

With title "Comorbidity assessment is essential during Covid-19 treatment", the research has been published in the journal "Frontiers in Physiology".

"For the research, we acquired the data of Covid-19 patients with associated comorbidities from countries, namely France, Italy, Netherlands, Spain, and Sweden," Jha said.

He said: "The study reveals that the majority of the dysfunctions are often related with deterioration of endothelial lining, thin layer of single flat cells that line the interior surface of blood and lymphatic vessels, thereby indicating that endothelium can be the target of SARS-CoV2."

The study revealed that deaths associated with cardiovascular diseases, kidney diseases, neurological ailments and diabetes are high.

One important outcome that the authors conclude is that deaths due to liver diseases are least associated with Covid-19 among all comorbidities.

Besides, Jha and his team pointed towards the Covid-19 treatment regime wherein the medication provided should be in consideration with the prevailing diseases. Therefore, the researchers concluded that the treatment of Covid-19 patients should be more focused on the basis of the preclinical history of patients i.e., whether patients have or had any kind of heart, lungs or kidney-related disease.

"How fast we are able to identify the virus-induced disorder in a person with certain comorbidity is equally important. It will enable to render the person with a suitable treatment plan within a safer timeframe," Jha said.

Shweta Jakhmola, Omkar Indari, Budhadev Baral along with Dharmendra Kashyap, Nidhi Varshney, Ayan Das and Sayantani Chatterjee were part of the research team.