

Letter to the Editor

Acetylsalicylic acid (Aspirin): a potent medicine for preventing COVID-19 deaths caused by thrombosis and pulmonary embolism

Dear Editor,

The anti-coagulant effect of acetylsalicylic acid (Aspirin) is long known¹. It inhibits platelet aggregation triggered by the release of arachidonic acid (AA) from platelet cells². Aspirin acetylates a serine residue irreversibly at 529 position, located inside the hydrophobic channel. It is present in close proximity to the catalytic site where AA gets metabolized. This results in hindrance of cyclooxygenase activity causing inhibition of Thromboxane A₂ which is responsible for thromboinflammation and thrombosis in patients²⁻⁴. This blockage is created for the life of the platelets which is usually 7-12 days. Thus, it can be considered as one of the reasons which confers aspirin pulmonary and cardioprotective benefits. It also helps in counteracting harm done by coagulation and thrombosis in patients. Hence, the function performed by aspirin can help in prevention of thromboinflammation, pulmonary embolism and thrombosis found commonly in COVID-19 patients⁵.

Thrombosis and pulmonary embolism are being reported in large number of COVID-19 patients. It creates respiratory problem leading to low oxygen count on pulse oximeters. It has also been proved by the autopsies of COVID-19 patients wherein thromboembolism and pulmonary embolism was found to be as the main cause of their deaths. The prevalence of death-causing pulmonary embolism in autopsies can be correlated to the unsuccessful resuscitation of the patients. Postmortem computed tomography (CT) of most of the patients' revealed reticular infiltration of the lungs. These reticular infiltrations are present in the form of severe bilateral and dense consolidation which histo-morphologically indicates diffuse alveolar damage⁵. It has also been found that thrombosis is not only restricted to pulmonary and cardiac regions, but found in various other organs of body, like kidneys and gastrointestinal tracts as well⁶.

The destruction and harms done by coronaviruses to the lungs and other organs of COVID-19 patients is not only restricted to the autopsies. The CT scans of COVID-19 survivors facing mild to acute attack shows ground glass opacities or haziness in lungs of the patients. The patients who suffered more seriously shows thickened interlobular and intralobular lines in combination with ground glass opacities and is known as crazy paving⁷.

Recommendation

It is a recognized fact today that COVID-19 patients shows different signs and symptoms of blood coagulation, thrombosis and pulmonary embolism. This has been proved by the computed tomographic reports of both the dead and survivors of COVID-19. There are reports that major percentage of deaths caused by SARS-CoV-2 is because of thrombosis. Particularly, venous thromboembolism and pulmonary embolism can be held responsible for approximately 91% of the deaths⁶. The known medicine which can be used for the treatment of thromboembolism and pulmonary embolism caused by COVID-19 is aspirin. Hence, the current article suggests that any person suffering from SARS-CoV-2 infection should be administered with aspirin at the earliest. This can help in preventing hospitalization of many patients and their untimely deaths caused by COVID-19. Furthermore, it will stop the harms done to various organs of COVID-19 survivors like lungs, kidneys etc. which can be progressive in nature.

Conflict of Interest

The Authors declare that they have no conflict of interests.

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