

ABSTRACT

ANTIOXIDANT UTILIZATION STUDY IN COVID-19 PATIENTS (Study at Universitas Airlangga Hospital Surabaya)

Siti Nuhaida

Infection of SARS-CoV-2 can cause oxidative stress through increased ROS and suppression of the antioxidant defense system in the body. Oxidative stress can lead to cytokine storms leading to the severity of COVID-19. Antioxidants, especially Vitamin C and NAC are potent antioxidants that can prevent and overcome oxidative stress. This study aims to analyze the antioxidant profile used in COVID-19 patients.

The study was an observational method using retrospective in COVID-19 patients who are hospitalized for May 2020 to February 2021 period. The sampling technique was simple random sampling and the sample size was 122. Data were analyzed descriptively.

The results showed that the most commonly used antioxidant for mild patients was Multivitamin (containing Vitamin C 750 mg) peroral 2x1. Meanwhile, in moderate, severe, and critical patients, the combination of NAC iv 1x5000 mg and Vitamin C iv 1x1000. The use of antioxidants Vitamin C and NAC in COVID-19 patients contributes to improving shortness of breath, laboratory data (Leukocytes, NLR, CRP), and hospital discharge conditions in mild to severe patients. Further study is needed regarding the effectiveness of antioxidants using oxidative stress marker parameters in COVID-19 patients.

Keywords: *COVID-19, oxidative stress, antioxidants*