Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Chest Infections

TYPE: Late Breaking Abstract

TOPIC: Chest Infections

NITRIC OXIDE MAY SERVE AS A HALLMARK OF LONG COVID

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PURPOSE: Explore whether nitric oxide may serve as a hallmark of long COVID.

METHODS: Two groups of volunteers were recruited, including 109 adults released from hospital for more than 4 months after recovery from SARS-CoV-2 infection, and 166 uninfected adults as the Control group. Blood was drawn and serum nitrite and nitrate were measured with chemiluminescence Nitric Oxide Analyzer 280i. Comparisons between groups or subgroups were performed using a two-tailed unpaired Student's t-test with OriginPro 9.1 (OriginLab) and Prism 7 (GraphPad). Correlation analysis, multivariate analysis of variance (MANOVA) and independent t-test were performed with SPSS Statistics V22.0 (IBM). Values for all measurements were expressed as mean±SD for parametric distributions. A p-value of <0.05 was considered statistically significant. A p-value between 0.05 and 0.1was considered borderline significant. All experiments were performed at least three times.

RESULTS: The Control group had significantly higher nitrite ($p<0.0001$) and lower nitrate ($p=0.0023$) than the recovered patients. In the recovered group, nitrate was positively correlated with aging, which was absent in the Control group. In addition, clinical severity didn't influence blood nitrite or nitrate levels among the recovered patients, i.e. no significant difference among mild-, common-, severe- and critical-type patients.

CONCLUSIONS: Taken together, serum nitrite and nitrate differentiated recovered COVID-19 patients from the uninfected group.

CLINICAL IMPLICATIONS: Blood nitrite and nitrate, two NO metabolites, might serve as hallmarks of long COVID-19.

DISCLOSURE: Nothing to declare.

KEYWORD: long COVID

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