

Letter to the Editor

Male sexual health and dysfunction

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COVID-19 and Erectile Dysfunction: Endothelial Dysfunction and Beyond

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Dear Editor.

We read with great interest the paper by Kresch et al [1] titled “COVID-19 Endothelial Dysfunction Can Cause Erectile Dysfunction: Histopathological, Immunohistochemical, and Ultrastructural Study of the Human Penis”, recently published on this Journal.

The Authors have collected penile tissue from four patients, two of which had a history of COVID-19 infection, for SARS-CoV-2 RNA using PCR. Remarkably, the two men with history of COVID-19 had undergone penile prosthesis surgery due to severe erectile dysfunction (ED), despite “normal erectile function” before the infection – suggesting a sudden onset of ED in previously healthy subjects, otherwise untreatable. In both COVID+ patients SARS-CoV-2 RNA was found in biopsy samples and reduced expression of endothelial nitric oxide synthase was reported by immunohistochemistry in corpora cavernosa, suggesting that endothelial dysfunction occurring in COVID-19 patients might affect the fragile vascular bed of the penis resulting in impaired erectile function.

Despite the small sample size, this study is commendable for the approach and provides an additional proof of the potential effects of COVID-19 on sexual and

reproductive health. As sexual activity has been demonstrated to act as a coping mechanism during lockdown [2], we believe that taking care of sexual health to preserve psychological health should be considered as a first-line treatment for COVID-19 long haulers. Several factors can possibly contribute to the onset of ED, or to the progression from subclinical to overt forms, in COVID-19 patients: on top of the endothelial dysfunction, subclinical hypogonadism, impaired pulmonary hemodynamics, and severe psychological burden can potentially affect erectile response [3]. The association of COVID-19 and sexual dysfunction has also been proven in our pilot study among Italian subjects [4], surprisingly not mentioned by Dr. Kresch and coworkers, showing an almost six-fold higher risk of having ED among COVID-19 subjects, once corrected for confounding factors, including age, body mass index (BMI), and psychological status (odds ratio [OR], 5.66; 95% confidence interval [CI], 1.50–24.01).

As more severe cardiovascular events can be predicted by the onset of ED [5], we believe that highlighting the potential role of ED as a “canary in the coal mine” would be relevant not only to sexual medicine experts, but also to the scientific community and to the general

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population as well. Indeed, the association between ED and COVID-19 is bidirectional, with a more than five-fold risk of contracting COVID-19 among subjects with impaired erectile function (OR, 5.27; 95% CI, 1.49–20.09), owing to the shared risk factors for both conditions such as increasing age and BMI [4].

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Conflict of Interest

The authors have nothing to disclose.

Author Contribution

Conceptualization: AS, EAJ. Supervision: EAJ. Validation: AS, EAJ. Writing — original draft: AS, EAJ. Writing — review & editing: AS, EAJ.

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