Estradiol, Immune-Protective Function and COVID-19: Correspondence

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Dear Editor

Dear Editor, we would like to share ideas on "Estradiol and COVID-19: Does 17-Estradiol Have an Immune-Protective Function in Women Against Coronavirus? (1)." Zangeneh and Shoushtari concluded that "MRT may be considered as a viable treatment option for women pre/post-menopause with coronavirus, referring to the fact that sex hormone (1)." We agree that estradiol might be clinically applicable for management of COVID-19. In a recent study, a shortterm estradiol supplement provided clinical advantage for management of non-severe COVID-19 (2). In addition to immunoprotective mechanism, estradiol might have also had usefulness via oxidative pathological pathway (3).

However, exact mechanism of estradiol against SARS CoV2 should be further clarified. Also, an effect on other side of the coin of estradiol should be discussed. In COVID-19, there is a risk for increased blood viscosity and thrombosis (4). Estradiol might affect coagulation system. The risk of thrombosis in COVID-19 might or might not occur if estradiol is used for management of infection. While estradiol might have immune-protective function, it is necessary to have a further study on its usefulness and risk in management of COVID-19.

Conflict of Interests

Authors have no conflict of interests.

References

- Zangeneh FZ, Shoushtari MS. Estradiol and COVID-19: Does 17-Estradiol Have an Immune-Protective Function in Women Against Coronavirus? J Family Reprod Health 2021; 15: 150-9.
- Seth S, Sharma R, Mishra P, Solanki HK, Singh M, Singh M. Role of short-term estradiol supplementation in symptomatic postmenopausal COVID-19 females: A randomized controlled trial. J Mid-life Health 2021; 12: 211-8.
- 3. Youn JY, Zhang Y, Wu Y, Cannesson M, Cai H.R Therapeutic application of estrogen for COVID-19: Attenuation of SARS-CoV-2 spike protein and IL-6 stimulated, ACE2-dependent NOX2 activation, ROS production and MCP-1 upregulation in endothelial cells. Redox Biol 2021; 46: 102099.
- 4. Joob B, Wiwanitkit V. Blood viscosity of COVID-19 patient: a preliminary report. Am J Blood Res 2021; 11: 93-5.

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