

Differential Covid-19 and Inpatients Evolution by Gender

Yane-Bianca¹ and Daniel Benharroch^{2*}

¹Benharroch, Kibbutz Sde Boker, Israel.

²Pathology Department, Soroka University Medical Center and Faculty of Health Sciences, Ben Gurion University of the Negev, Beer Sheva, Israel.

Received June 16, 2020; Revised June 17, 2020; Accepted June 19, 2020

ABSTRACT

The disparity regarding gender distribution in patients with COVID-19 was first reported towards the end of April 2020 in China. It showed a predilection for Chinese women of Han extraction, afflicted by a form of essential hypertension, which is related with the SNPs and associated with the ACE2 gene.

Keywords: Gender, Europe, Outcome, ACE2, Diabetes, Obesity, COVID-19

COMMENTARY

In spite of the preference described above for women of Han origin with regard to COVID-19, a propensity for a serious-to-critical disease is mainly displayed in older men hospitalized for severe COVID-19, and suffering from a variable number of comorbidities [1-4]. These additional afflictions worsen the course of the illness and lead many of the patients to a fatal outcome [5]. The opinion adopted in China is that, although the prevalence for COVID-19 by gender is comparable, men have a higher tendency for a more aggressive form of the disease, independently of their age [5]. Investigations from Italy, and other European countries have pointed out at a lesser predilection for viral infectious diseases among women, notably with those involving single stranded RNA viruses. This difference might result from a variable innate immunity, steroid hormones or from disparate sex chromosomes, when compared to men [6]. Moreover, sex-related COVID-19 mortality might originate from hormone-induced ACE2, vitamin D deficiency and an increased tendency for venous thromboembolism [7]. Consideration should be given to the global results of RT-PCR tests for SARS-CoV-2 RNA, found to be similar for women and for men. However, more than half the men will be seriously ill, many dying of sequels of the infectious disease [8,9]. In order to highlight the complexity of the COVID-19 gender issue, suffice to say that the long-term complications of SARS-CoV-2 may be more severe for women and they may concern mainly psychological and social disorders [9,10]. In conclusion, although a prime impression concerning the gender impact on the development of COVID-19, indicates a predilection for male patients, notably older males, different opinions have also been expressed. Women have been found to predominate in two situations regarding this malady: the case of the Han women in China who suffer from a specific

type of essential hypertension; the other condition affects preferably women with long run psychological and social sequels of the COVID-19.

ACKNOWLEDGEMENT

We thank Maya Benharroch for productive discussions.

CONFLICT OF INTEREST

The authors declare that no conflict of interests exist.

REFERENCES

1. Singh Y, Gupta G, Mishra A, Chellappan DK, Dua K (2020) Gender and age differences reveal risk patterns COVID-19 outbreak. *Alter Ther Health Med* 2020: AT6476.
2. Peters MC, Sajuthi S, Deford P, Michael TM, Prescott GW, et al. (2020) COVID-19 related genes in sputum cells in asthma: Relationship to demographic features and corticosteroids. *Am J Respir Crit Care Med*.
3. Yan Y, Yang Y, Wang F, Kun D, Xuefeng Y et al. (2020) Clinical characteristics and outcomes of patients with severe COVID-19 with diabetes. *BMJ Open Diabetes Res Care* 8: e001343.

Corresponding author: Daniel Benharroch, Pathology Department, Soroka University Medical Centre, Rager Blvd, P.O. Box 151, Beer Sheva 84101, Israel, Tel: 972-507579140; E-mail: danielbenharroch1@gmail.com

Citation: Benharroch D & Yane B. (2020) Differential Covid-19 and Inpatients Evolution by Gender. *J Nurs Occup Health*, 1(3): 105-106.

Copyright: ©2020 Benharroch D & Yane B. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

4. Cai Q, Chen F, Wang T, Jacob G, Ming HZ (2020) Obesity and COVID-19 severity in a designated hospital in Shenzhen, China. *Diabetes Care* 14: dc200576.
5. Jin JM, Bai P, He W, Fei W, Shi L, et al. (2020) Gender differences in patients with COVID-19: Focus on severity and mortality. *Front Public Health* 8: 152.
6. Conti P, Younes A (2020) Coronavirus COV-19/SARS-CoV-2 affects women less than men: Clinical response to viral infection. *J Biol Regul Homeost Agents* 34.
7. La Vignera S, Cannarella R, Condorelli RA, Aversa A, Calogero AE, et al. (2020) Sex-specific SARS-CoV-2 mortality: Among hormone-modulated ACE2 expression, risk of venous thromboembolism and hypovitaminosis D. *Int J Mol Sci* 21: E2948.
8. Serge R, Vandromme J, Charlotte M (2020) Are we equal in adversity? Does COVID-19 affect women and men differently? *Maturitas* 2020
9. Gemmati D, Bramanti B, Serino ML, Veronica T, Paola S, et al. (2020) COVID-19 and individual genetic susceptibility/receptivity: Role of ACE1/ACE2 genes, immunity, inflammation and coagulation. Might the double X chromosome in females be protective against SARS-CoV-2 compared with a single chromosome in males? *Int J Mol Sci* 21: E3474.
10. Liu N, Zhang F, Wei C, Yanpu J, et al. (2020) Prevalence and predictors of PTSS during COVID-19 outbreak in China hardest hit areas: Gender differences matter. *Psychiatry Res* 287: 112921.