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Differential Covid-19 and Inpatients Evolution by Gender

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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.

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CONFLICT OF INTEREST

The authors declare that no conflict of interests exist.

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