

Skin Manifestations of COVID-19

Vitoria Azulay^{1*}, Mônica Manela Azulay² and Rubem David Azulay¹

¹Souza Marques University, Rio de Janeiro, Brazil

²Federal University of Rio de Janeiro, Brazil

Abstract

Coronavirus is a zoonotic RNA virus that cause respiratory infection, from the Coronaviridae family. They were first isolated in 1937 and designated coronaviruses, because they have a crown-like appearance under microscopy. The clinical spectrum of this disease is quite broad, ranging from a cold to severe pneumonia. Usually, patients develop signs and symptoms such as fever and respiratory illness. As it is a systemic disease, it is also related to the skin. Some clinical manifestations have been described, such as petechiae rash, urticaria, livedo reticular. In this article we have the objective to explain more about this clinical scenario.

Keywords: Covid-19 • Skin manifestations • Petechiae rash • Urticaria

Introduction

Corona Virus is a zoonotic RNA virus that cause respiratory infection, from the Coronaviridae family. They were first isolated in 1937 and designated corona viruses, because they have a crown-like appearance under microscopy [1]. In December 2019, the initial cases of COVID-19 were reported in China. Currently, this infection has become a pandemic and significant researches are taking place all over the world in order to understand the transmission, physiopathology, clinical manifestations, treatment and prevention measures (Figure 1).

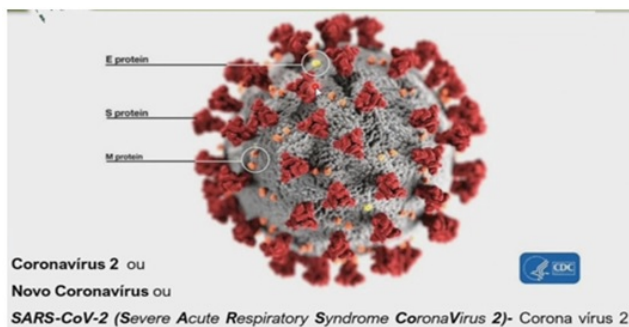


Figure 1: This illustration, created at the centers for disease control and prevention, reveals ultrastructural morphology exhibited by Novel Coronavirus.

Clinical manifestations

The clinical spectrum of this disease is quite broad, ranging from a cold to severe pneumonia. Usually, patients develop signs and symptoms such as fever and respiratory illness [1,2]. Isolated sudden onset anosmia has also frequently been reported. Less frequently, rhino rhea, diarrhea and dysgeusia may be associated.

It has been understood that the COVID-19 is responsible for thrombotic complications.

Preliminary reports on COVID-19 pandemic outcomes have shown that infected patients commonly develop thrombocytopenia (36.2%) and may have elevated D-dimer (46.4%) [3,4]. It can be explained by the excessive activation of the coagulation cascade and platelets, endothelial dysfunction, von Willebrand factor elevation, Toll-like receptor activation and tissue factor pathway activation [5].

Skin manifestations

Regarding the skin, some clinical manifestations have been studied and are connected to COVID-19. For instance, as many patients present with a clinical scenario of thrombocytopenia, they can develop a petechiae skin rash. In a study in Thailand, there were 48 cases of COVID-19, and one patient developed a skin rash with petechiae. Because dengue is very common in their setting, as well as in Brazil, a clinical diagnosis of dengue was made. A few days later the patient developed respiratory problems and was diagnosed with COVID-19, resulting in a delayed diagnosis [6].

Furthermore, it was described some few cases of erythematous rash, urticaria, and vesicles. These manifestations can appear before the diagnosis of COVID-19 or at the same time. It usually appears in middle-age adults [7].

Another manifestation is the live do reticular, in which there is mottled discolouration of the skin. It is described as being a reticular cyanotic discoloration that surrounds pale central skin. It usually appears in the trunk and extremities of serious patients. It is more common in the end stage of the disease (Figures 2-4) [8-10].

*Address for Correspondence: Vitoria Azulay, Souza Marques University, Rio de Janeiro, Brazil, E-mail: viazulay@gmail.com

Copyright: © 2020 Azulay V, et al. 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.

Received: 15 May, 2020; Accepted: 27 May, 2020; Published: 2 June, 2020



Figure 2: Livedo reticularis of the skin [8].

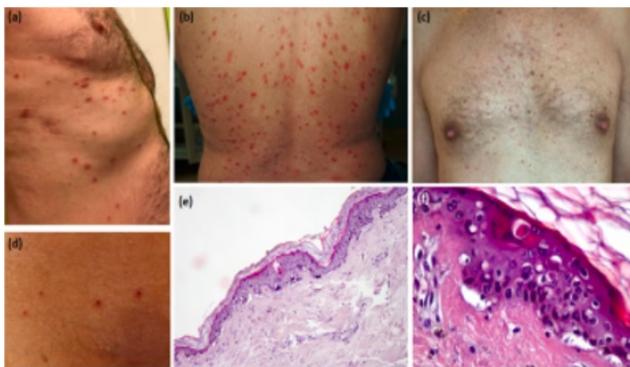


Figure 3: Petechiae rash [9].



Figure 4: Urticariform rash [10].

Conclusion

A better understanding of the implications of COVID-19 is still needed. It is important to know that skin manifestations can present before, during and after the disease and it has been associated with the patient's prognosis.

References

1. Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19).
2. Guan, Wei-Jie, Zheng-Yi Ni, Yu Hu, Wen-Hua Liang, et al. "Clinical characteristics of coronavirus disease 2019 in China." *New Eng J Med* 382 (2020): 1708-1720.
3. Huang, Chaolin, Yeming Wang, Xingwang Li, Lili Ren, et al. "Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China." *The lancet* 395 (2020): 497-506.
4. Guan, Wei-Jie, Zheng-Yi Ni, Yu Hu, Wen-Hua Liang, et al. "China Medical Treatment Expert Group for COVID-19: Clinical characteristics of coronavirus disease in 2019." *N Engl J Med* 382 (2020): 1708-1720.
5. Subramaniam, Saravanan, and Inge Scharrer. "Procoagulant activity during viral infections." *Frontiers in Biosci (Landmark edition)* 23 (2018): 1060-1081.
6. Joob, Beuy, and Viroj Wiwanitkit. "COVID-19 in medical personnel: Observation from Thailand." *Journal Hosp Infec* 104(2020): 453.
7. Darlenski, Razvigor, and Nikolai Tsankov. "Covid-19 pandemic and the skin-What should dermatologists know?." *Clin Dermatol* (2020).
8. Sajjan, Vijaya Veeranna, Snehal Lunge, Manjunathswamy Basavapuruda Swamy, and Ashok Maharudrayya Pandit. "Livedo reticularis: A review of the literature." *Ind Dermatol Online J* 6 (2015): 315.
9. Marzano, Angelo Valerio, Giovanni Genovese, Gabriella Fabbrocini, Paolo Pigatto, et al. "Varicella-like exanthem as a specific COVID-19-associated skin manifestation: Multicenter case series of 22 patients." *J Am Acad Dermatol* (2020).
10. Henry, Diane, Marianella Ackerman, E. Sancelme, A. Finon, et al. "Urticarial eruption in COVID - 19 infection." *Journal of the European Academy of Dermatology and Venereology* (2020).

How to cite this article: Vitoria Azulay, Mônica Azulay and Rubem David Azulay. "Skin Manifestations of COVID-19". *J Dermatol Dis* 7 (2020) doi: 10.37421/JPD.2020.7.287