

Letter to Editor: Prevention and Importance of Care for Pressure Ulcers in People With Coronavirus in Iran



Keyvan Salehi¹ , Mina Sadat Mirshoja^{2*}

1. Department of Curriculum Planning, Faculty of Education and Psychology, University of Tehran, Tehran, Iran.

2. Department of Occupational Therapy, School of Rehabilitation Sciences, Neuromuscular Rehabilitation Research Center, Semnan University of Medical Sciences, Semnan, Iran.



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Dear Editor

On December 30, 2019, three patients with symptoms of bronchoalveolar lavage, or pneumonia of unknown cause, were admitted at Jinyintan Wuhan Hospital in China. Shortly afterward, bioinformatics analysis revealed that the virus belonged to the beta-corona strain of the B2 virus [1], which the World Health Organization called COVID-19 [2]. COVID-19 infection has significantly spread worldwide [3]. The number of patients in Iran from January 3 to December 2, 2020, was 975951, and the number of deaths was 48628 [4].

Disease manifestations based on 55924 laboratory-confirmed samples since February 20, 2020, were fever (87.9%), dry cough (67.7%), fatigue (38.1%), sputum production (33.4%), shortness of breath (18.6%), sore throat (13.9%), headache (13.6%), chills (11.4%), nausea or vomiting (5%), nasal congestion (8 4.8), and diarrhea (3.7%) [1]. One of the consequences of hospitalization due to this disease is wound formation, which few articles have addressed.

Although ulceration is not a primary concern in the disease, it is estimated that more than 2.5 million people suffer from pressure ulcers each year, of which more than

60000 die [5]. People with COVID-19 are no exception, and some severe cases experience coma, sedentary state [1], and decreased perfusion due to acute respiratory problems [3]. The most common body points of pressure sores are the back of the head, sacrum, scapula, buttocks, iliac spine, heel, and big toe [6]. Continuous external pressure [3], changes in the natural structure and function of the skin [1], disorders of the inflammatory phase, proliferation or regeneration of wounds [2], history of underlying diseases such as diabetes, cardiovascular disease, hypertension [2], and being over 65 years of age make chronic wound management more difficult in these patients [7]. Besides, diarrhea is one of the common symptoms of these patients (2-49-5%), which may be a reason for the occurrence of pressure ulcers in the sacral region of patients admitted to the intensive care units. Wounds in this area are also very susceptible to fecal contamination. Studies indicate that excreted feces with a high infection capacity in 23% to 82% of patients will continue for 1 to 11 days [3]. About 13.8% of patients with mild to moderate COVID-19 experience a delay in the wound healing process with/without infectious manifestations due to inadequate oxygen delivery (93% blood oxygen saturation). Infection of pressure sores increases the risk of death in these individuals [1], so the primary goal of this study was to help treatment by focusing on skin injury prevention, length of hospital

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*** Corresponding Author:**

Mina Sadat Mirshoja, MSc. PhD.

Address: Department of Occupational Therapy, School of Rehabilitation Sciences, Neuromuscular Rehabilitation Research Center, Semnan University of Medical Sciences, Semnan, Iran.

Tel: +98 (912) 4921087

E-mail: msj5831@yahoo.com

stay, and surgery. It is necessary to minimize the damage caused by these ulcers.

Most plastic surgeons are responsible for wound care [8]. In addition, the effective methods of care of these ulcers are following rehabilitation instructions for daily monitoring of pressure ulcers, replacement [3] and use of thin silicone foam dressing [9], minimizing moisture and excessive sweating of the skin, elimination of malnutrition, medication precautions with emphasis on reducing consumption of sedatives, even weight distribution with constant changes in body position, physiotherapy [3], and massage [6]. Pressure wound care is so important that it affects the patients' health and quality of life of. Therefore, informing health professionals and patients is an essential step in reducing health care costs [10].

Ethical Considerations

Compliance with ethical guidelines

All ethical principles are considered in this article. The participants were informed of the purpose of the research and its implementation stages. They were also assured about the confidentiality of their information and were free to leave the study whenever they wished, and if desired, the research results would be available to them. A written consent has been obtained from the subjects. principles of the Helsinki Convention was also observed.

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Authors' contributions

Conceptualization, methodology, and supervision: Keyvan Salehi; Investigation, writing – original draft, and writing – review & editing: Mina Sadat Mirshoja.

Conflict of interest

The authors declared no conflict of interest.

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References

- [1] National Health Commission. WHO-China Joint Mission on Covid-19 final report [Internet]. 2020 [Update 2020 February 24]. Available from: <https://covid19.alliancebrh.com/covid19en/c100037/202004/cbe307e7e76044159265e6d-a390b46d3.shtml>
- [2] Wang R, Peng Y, Jiang Y, Gu J. Managing chronic wounds during novel coronavirus pneumonia outbreak. *Burns & trauma*. 2020; 8:tkaa016. [DOI:10.1093/burnst/tkaa016] [PMID] [PMCID]
- [3] Tang J, Li B, Gong J, Li W, Yang J. Challenges in the management of critical ill COVID-19 patients with pressure ulcer. *International Wound Journal*. 2020; 17(5):1523-4. [DOI:10.1111/iwj.13399] [PMID] [PMCID]
- [4] WHO. WHO Health Emergency Dashboard [Internet]. 2020 [Updated 2020 December]. Available from: [tool/world-health-organization-health-emergency-dashboard-117/](http://www.who.int/emergencies/dashboards/novel-coronavirus-2019)
- [5] Rodriguez A. Bedsores kill over 60K people in the US each year. Amid COVID, experts worry more may be at risk [Internet]. 2020 [Updated 2020 November 18]. Available from: <https://www.msn.com/en-us/health/medical/bedsores-kill-over-60k-people-in-the-us-each-year-amid-covid-experts-worry-more-may-be-at-risk/ar-BB1b7VtH>
- [6] Motaqi M, Ghanjal A. [Functional dimensions and rehabilitation status in COVID-19 patients: Narrative review (Persian)]. *Journal of Military Medicine*. 2020; 22(6):641-7. [DOI:10.1111/iwj.13409]
- [7] Oropallo A. COVID-19: Issues related to wound care and telehealth management [Internet]. 2021 [Updated 2021 July 1]. Available from: <https://www.uptodate.com/contents/covid-19-issues-related-to-wound-care-and-telehealth-management>
- [8] Hsieh MW, Lee CC, Ou SF, Kuo YR. Telemedicine algorithm for chronic wound care during COVID-19. *International Wound Journal*. 2020; 17(5):1535-7. [DOI:10.1111/iwj.13409] [PMID] [PMCID]
- [9] Zingarelli EM, Ghiglione M, Pesce M, Orejuela I, Scarrone S, Panizza R. Facial pressure ulcers in a COVID-19 50-year-old female intubated patient. *Indian Journal of Plastic Surgery*. 2020; 53(1):144-6. [DOI:10.1055/s-0040-1710403] [PMID] [PMCID]
- [10] Voegeli D. Prevention and management of moisture-associated skin damage. *Nursing Standard*. 2019; 34(2):77-82. [DOI:10.7748/ns.2019.e11314] [PMID]